

Is Moderate Drinking Injurious?

By Dr. ANDREW WILSON. See page 228.

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EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

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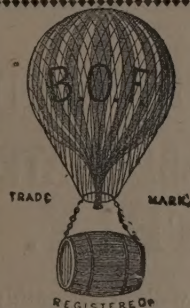
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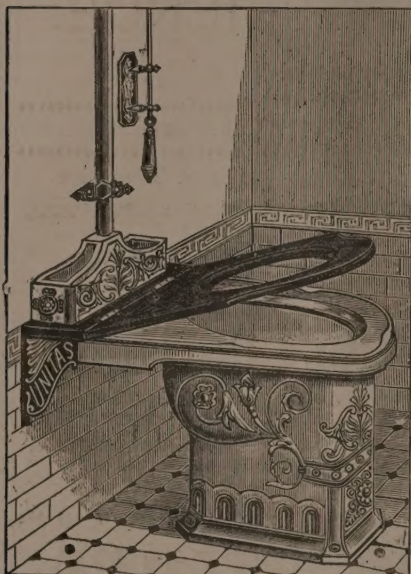
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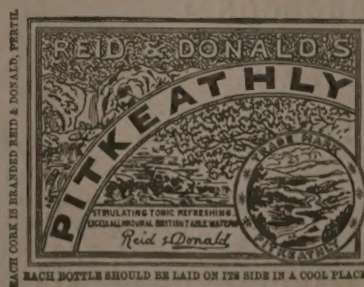


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♦ HEALTH ♦

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Notes by the Way

BY THE EDITOR.

Health is the foundation of all our physical happiness."—Herder.

In the May number of the *Archives of Pediatrics* I observe Dr. A. Jacobi publishes remarks on the giving of medicines to children that are of especial value. When it is necessary to do this, he tells us, all excitement must be avoided, as children are nervous and easily apprehensive. "Fear, pain, screaming, and self-defence lead to disturbances of circulation and waste of strength. Preparations for local treatment or the administration of a drug must be made out of sight, and the latter ought not to have an unnecessarily offensive taste. Still the final termination of the case and the welfare of the patient are the main-objects in view, and the choice between a badly-tasting medicine and a fine-looking funeral ought not to be difficult." The actual giving of the medicine often requires considerable skill, and is a task in which there is usually shown more of clumsiness than tact. "Always teach a nurse," adds the author, "that a child cannot swallow as long as the spoon is between the teeth; that it is advisable to depress the tongue a brief moment and withdraw the spoon at once, and that now and then a momentary compression of the nose is a good adjuvant.

IN connection with the subject of season and disease the following particulars will be perused with interest. While it appears from the records of the English health officers that some diseases have special seasons in which they are most likely to prevail, it is not shown that occasional variations in temperature have much influence in the matter. Scarlet fever is at its minimum from January to May, and at its maximum in October and November. Diphtheria is more evenly distributed through the year, and is most dangerous a little later than scarlet fever. Typhoid fever is especially characteristic of autumn. Measles and whooping-cough seem to be somewhat aggravated by cold weather, but are most fatal in May and June. Hot weather is adverse to small-pox, and unfavourable to disorders of the bowels, particularly in children.

♦ ♦ ♦

SOME special points there are in reference to "house-cleaning," says a sound writer, which are not generally enough known and acted upon. Two of these, however, bear upon the construction of the floors and walls and are beyond the housekeeper's control. The sweepings, dust and waste of whatever sort, collected in the cleaning, should not be thrown in the yard or out-of-the-way corner, but should all be burned. Carpets and rugs should be taken a good distance away from the dwelling, as to a large field, to be shaken and beaten. It is surprising that municipal authorities permit, as some of them do, carpets to be beaten in towns and villages in vacant lots quite near to dwellings. Windows are commonly open at such a time, and the objectionable excremental dust from the carpets is often in such cases blown directly into neighbouring houses.

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THE floors and walls of dwellings should be so constructed as to be impervious to moisture and dust. Those who are informed on the subject of micro-organisms in the air of rooms will readily understand how important it is that floors should be absolutely dust proof. A layer or two of good paper under a carpet will help greatly to prevent dust getting into the cracks of ordinary floors. The ordinary plastered walls absorb the moisture of the breath with its poisonous contents, and all walls should be made impervious to moisture and of such material as to permit of being well washed. With impervious walls and floors, and no cracks at joints or elsewhere, a house can be perfectly cleaned; otherwise it cannot be.

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MR. F. E. MATTHEWS has been investigating the subject of arsenical poisoning by means of cretonnes, imitation Indian muslin, and other fabrics. He gives the following results of his inquiries in the *Daily Telegraph*. Dr. Giffard, the medical officer at Cooper's Hill, had brought him some cases in which he thought he detected symptoms of arsenical poisoning; and in every case the source of the poisoning was traced either to a cretonne or to an imitation Indian muslin, used as a decoration by the student. The samples upon which the experiments have been performed were supplied by a local tradesman.

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THE results obtained on analysis were as follows:—Forty-four samples of cretonne have been analysed, and of these none were found absolutely free from arsenic. Three contained only the very faintest trace, and twenty-one contained larger traces. The remaining samples all contained arsenic in poisonous quantities. Eleven of them were grouped as "very bad," and the other nine as bad and distinctly dangerous. One of the worst specimens had been examined quantitatively, and yielded an amount of arsenic equivalent to rather more than the $1\frac{1}{2}$ grains of white arsenic per square yard.

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MR. MATTHEWS adds:—"It is quite a common occurrence to have enough of these substances in a room which would contain sufficient arsenic to give 100 people a fatal dose. As far as the analyses have gone at present, they do not show that any one colour is more poisonous than another, as, strange to say, the greens and blues, that would be the first suspected, have until now proved purer than reds, browns, and blacks. In the case of imitation Indian muslins, five samples only have been analysed, but they all contained arsenic in poisonous quantities." Is the day never to dawn when such arsenical contamination of fabrics, wall-papers, &c., will be prevented by law?

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THE popular faith-cure mode of healing, says an American journal, which is being peddled about the country at the present time, does not seem to prosper well in Kansas. At Salina, recently, one of these mountebanks undertook to cure a case of small-pox by the laying on of hands. As the result, the health officer considered it his duty to interfere, and both the patient and the "healer" are now quarantined in a deserted blacksmith shop in the suburbs.

◆ ◆ ◆

A CASE of very early child-bearing has occurred at Ilkeston, the mother being only 12 years old; and a paragraph is going the rounds of the press stating that this is an unprecedented fact. Though very remarkable, especially in a temperate climate, the case is not unprecedented. Reference was made in the *British Medical Journal* eighteen months ago to a case in which the mother was only $11\frac{1}{2}$ years old; and in Barnes's *Obstetric Medicine and Surgery* several authentic cases of precocious maternity are quoted. Of these may be mentioned one by Mr. Dodd, of Billington, who himself attended the case of a woman on August 8th, 1871, when a girl was born. This girl Mr. Dodd delivered of a healthy child, weighing seven pounds, on March 7th, 1881, just 147 days before she had reached the age of 10 years. Mr. Dodd supplied Dr. Barnes with authentic proofs of the facts of this case.

Original Essays

"Life is not to live, but to be well."—*Martial*.

VIVISECTION.

By E. GODWIN CLAYTON, F.I.C., F.C.S.

A FEW years since, some well-intentioned but mistaken people endeavoured to force legislation which should render illegal, under all circumstances, the performance of scientific experiments upon living animals. Although, fortunately, wiser counsels prevailed, to the extent that the conduct of such experiments was merely placed under certain restrictions and not absolutely prohibited, the effect of what is commonly known as the "Vivisection Act," or, more correctly, the "Cruelty to Animals Act" of 1876, has been distinctly adverse to the progress of English scientific research.

Not satisfied with the partial success of their attack upon one of the most important instruments of the pathologist, the chemist, and the physiologist, the opponents of vivisection formed themselves into various societies, some of which, it is believed, are moribund, if not defunct, while others have continued the warfare to the present time. Nothing will assuage the wrath of these people but the absolute abolition of vivisection; or, in other words, the unconditional prohibition of scientific experiments upon living animals. For it may be remarked here that the literal meaning and the generally accepted sense of the word "vivisection" are by no means synonymous. It is necessary to remember that any scientific experiment whatever (whether involving skin-puncture, dissections, or even the administration of a drug) performed upon a living vertebrate animal, and calculated to give pain, is an act of vivisection. The chemist who places a droplet of hyoscyamus tincture upon the eyelid of a mouse is, then, as liable to prosecution (if he have not previously received a license from the Secretary of State) as is the physiologist who exposes the brain of a living dog.

Those who desire the total abolition of vivisection oppose it on three principal grounds. They object to these experiments, firstly, upon moral grounds; secondly, because, say they, experiments on living creatures are useless; and thirdly, because they are cruel. An endeavour will be made in this article to combat these propositions.

To begin with, it is asserted by the opponents of vivisection that we have no moral right to experiment upon the living bodies of the lower animals. If we admit this, however, must we not also admit it to be wrong to apply the spur, to use the whip, or even to harness a horse? Still more so to use the bearing rein, to brand an ox, or to destroy by an operation the procreative power of an animal? Must we not also have serious doubts as to the morality of plucking the breast-feathers from the cygnet, and the quills from the goose-wing? The wretched birds whose artificially enlarged livers form that delicacy, a *pâté de foie gras*, might express some pertinent opinions, were they able to speak, upon these points. The annual wanton sacrifice of thousands of beautiful birds for the adornment of ladies' garments, the fattening of cattle for public exhibition, and, above all, the scandalous treatment of animals on their way to the slaughter-house, are matters of everyday knowledge.

Yet again, what shall be said of angling, deer-stalking,

fox-chasing, otter-hunting, coursing, and such whole sale slaughter as that which annually takes place on August 12th and September 1st? It is difficult to realize that the great majority of the members of the Legislature by which the Cruelty to Animals Act, 1876, was passed, are men who take part in these so-called sports; and it is equally difficult to hear without disgust the well-worn and stock apologies of sporting men for their amusements. The destruction of vermin forsooth! and the provision of food! Can it be conscientiously affirmed that these excuses are *bona fide*? If, as is almost universally received, men have a moral right to do all these things, few or none of which have a great and lasting influence for good upon the community, it will be found impossible to deny that they are fully justified in making experiments upon living animals. These experiments, as an effort will be made hereafter to show, have in many cases been the means of saving posterity from incalculable pain and disease. And it must by no means be forgotten that human beings are not the only gainers by the access of knowledge resulting from vivisection experiments. Animals, too, have profited, and do profit, by the results of this species of research, which is, in short, conducive in the highest degree to the happiness of the greatest number—not only of men, but of the lower animals. Here, surely then, the end justifies the means. Many operations performed upon living men and women, in our hospitals and elsewhere, administrations of new drugs, &c., are necessarily experimental and tentative, and are just as much vivisection experiments as if the subjects were rabbits or guinea-pigs. It is at least somewhat remarkable, therefore, that the sentimentality of the anti-vivisectionist *coterie* is entirely bestowed upon the latter.

Next among the assertions of the anti-vivisectionists we find the statement repeatedly made that experiments upon living animals are useless. Now, this accusation is a very grave one, because if it were capable of being shown to be true, a defence of vivisection would be purely academic and no longer utilitarian. It is therefore proposed to enter into this part of the subject at some length; to point out the kinds of research in which experiments on living animals are of value, and to show that some of the most supremely important scientific discoveries have been made by the aid of such experiments. By far the majority of great scientific discoveries have been based on experiment; and the absolute need of experimental observation and induction, so grandly taught by Francis Bacon, is now acknowledged everywhere by scientific men. Not only have physiology, medicine, and surgery been no exceptions to this rule, but experiments on living animals have yielded some of the grandest results in those sciences.

Experiments of this character are of the greatest value in:—1. Medicine and Surgery; 2. Toxicological Analysis and Research; 3. Bacteriological Investigations. Taking these branches of research in order, we shall find, on looking through the annals of surgery, that the greatest names to be met with are those of men who did not hesitate to experiment upon living animals. The immortal W. Harvey's monumental work, "On the Movement of the Heart and the Circulation of the Blood," contains three consecutive chapters embodying his observations on the movements of the heart and blood in dissected living animals. Particulars are given of the animals experimented upon, and of the knowledge gained from the experiments. John Hunter's idea of comparative anatomy and pathology was based on an enormous number of experiments, many of which

were made upon living animals.* His researches in connection with the subject of aneurism, which were followed up and extended by Scarpa, of Padua, and which have been acknowledged to be of the greatest importance and value, were based on numbers of experiments performed on living dogs, sheep, oxen, and horses. Hunter also studied the process by which divided tendons are united by severing the tendo achillis in dogs—an experiment which led to sub-cutaneous surgery. Amputation at the hip-joint, which must have saved the lives of so many hundreds on the battle-field, was not attempted on the human subject until it had been proved to be possible by actual trial on living animals.

Again, the operation of paracentesis thoracis (or chest-puncture), for pneumo-thorax, was performed by W. Hewson on the basis of experiments made on living dogs and cats. Cruickshank, Abernethy, George Freer, and Astley Cooper all experimented upon living animals, with results of the greatest importance to humanity. The last-named, for instance, ventured to ligature the carotid artery of a man only after he had tried the same experiment on a living dog, and proved that the dog lived for months after both the vertebral and carotid arteries had been ligatured on the same day—the full resources of the circulation being thus shown, and many new departures in surgery being justified. Other experiments upon living animals led to the introduction (by Amussat) of torsion of arteries, proved that living structures can tolerate the presence of metallic bodies, such as drainage-tubes, &c., and threw much light upon the subject of blood-poisoning. Thus, Hunter experimented upon horses and other animals during the preparation of his essay, "Observations on Inflammation of the Internal Coats of Veins."

The operation of transfusion of blood, which, according to Dr. Roussel, has saved many lives after all other means failed, was first performed upon living animals, in the seventeenth century, by the Hon. R. Boyle and by Dr. Lower. The removal of the cancerous upper extremity of a human stomach was only attempted after the excision of part of a dog's intestine and survival of the dog, together with other similar experiments by Shipton, Dupuytren, Travers, &c. These experiments also led to successful operations for strangulated hernia and intestinal wounds. The substitution, in many cases, of excision of a diseased bone for amputation, is to a large extent due to vivisection experiments, made by Syme, prior to the year 1837. Finally, Chassaignac (the inventor of the *écraseur*), Sir Charles Bell, Sir Benjamin Brodie, Sir James Paget, Drs. Lauder Brunton, Ferrier, and Michael Foster, and Prof. Virchow may be cited as among those who have made experiments upon living animals, because they found them to be necessary to the successful prosecution of their several researches.

Proceeding to chemistry, we find that the properties of the alkaloidal and other active principles of plants—poisonous and non-poisonous—cannot be completely studied without experiments upon living animals, consisting in the administration of these compounds to the brutes under various conditions of health, age, and sex. In some cases, the identification and detection of complex organic bodies is barely possible, except by a study of the effects produced by these compounds when injected into the circulatory system of, or otherwise administered to, the lower animals. In toxicological chemistry, particularly in a legal connection, this is literally of vital

* Vide "Influence of Vivisection on Human Surgery." A lecture delivered by Samson Gamgee at the Birmingham Medical Institute, in 1882.

importance. It will be remembered that the chief scientific evidence which led to the just conviction and execution of a notorious murderer, Lamson, in a *cause célèbre* which disfigured the annals of 1882, was based upon some experiments consisting in the administration of a violently poisonous alkaloid to some mice. Again, some of the obscurest problems of physiological chemistry, such as those connected with the assimilation and digestion of food, have been solved only by an examination of the contents of different portions of the alimentary and digestive systems, removed from the living bodies of the lower animals. Such experiments have, indeed, necessitated vivisection in the literal meaning of the word.

(To be concluded.)

IS MODERATE DRINKING INJURIOUS?

By DR. ANDREW WILSON.

FIFTH AND LAST PAPER.

THE story of the brain's attack in the matter of alcohol is worth recounting in Dr. Harley's own words:—"The increase of the cerebral circulation consequent upon the increase in the heart's action from the imbibition of small quantities of alcohol acts prejudicially, however, upon the brain in yet another way—namely, by its causing an engorgement and dilatation of the cerebral (or brain) arteries. For seeing that Nicol and Mossop found that so small a quantity as two teaspoonfuls of absolute alcohol caused marked congestion of the retinal (or eye) blood-vessels—which derive their blood supply from the same source as the cerebral vessels—it is natural to infer that even the small quantity of two teaspoonfuls of alcohol will induce the same amount of congestion in the branches of the blood-vessels within the cranium as it does in those immediately outside of it. And if so, seeing that the organ is confined within a limited space and surrounded on all sides by unexpandable ridged walls, by their engorgement and dilatation they must of necessity press injuriously upon the brain substance. The pressure thus exerted on the nerve cells and fibres will not only prevent their performing their functions properly, but at the same time interfere with their nourishment, and consequently lead to a degeneration of their constituents.

"The deleterious effects of congestion of the intercranial (those inside the head) blood-vessels are rendered apparent to us in yet another way—namely, by the feeling of fulness or tightness of the head experienced by many persons after partaking of alcoholic stimulants. Moreover, it appears to me that the facts just alluded to afford a reasonable explanation of why it so often happens that persons who indulge in small quantities of spirits while engaged in arduous mental labour frequently suffer from a sudden mental break-down, notwithstanding that the immediate effect of the stimulants had appeared to be beneficial to them by increasing their brain power. My explanation of the cause of the mental collapse is that the brain, like every other organ of the body, while in a state of functional activity, draws to it a super-supply of blood, and consequently, when alcohol is taken, it adds to the already existing engorgement of the cerebral vessels arising directly from the brain's activity, by accelerating the heart's action, and thereby augmenting its deleterious effects by still further increasing the pressure exerted on the nerve cells and fibres by the already dilated and engorged vessels."

This is a serious indictment of alcohol in relation to the work of the nervous system; but it appears to me that it is best illustrated in those only too common cases in which, firstly, the use of alcohol has been immoderate

in character; secondly, where ardent spirits (whisky, gin, rum, and brandy, &c.) have been consumed; and thirdly, where there has been special susceptibility to the action of such stimulants.

The liver has been popularly credited with being the chief organ to suffer in a primary sense from alcoholic indulgence. That the liver exerts in its turn a potent influence in the causation of nervous disorders seems to be proved in a ready fashion. For our author reminds us that "The very large number of nerve affections, more especially in the form of intellectual disturbances, which come under the notice of liver specialists, are in a great measure attributable to the disorder of the biliary functions brought about by the habitual indulgence in small quantities of alcohol between meal-times. For, as is well-known, scarcely a more formidable cerebral poison than bile exists. So potent, indeed, is the effect of bile circulating in the blood upon the intellectual faculties, that the special name of 'bilæmia' has been invented for it. And who amongst us does not know, probably even from personal experience, the mental disturbance a mere temporary attack of biliousness produces? Memory is impaired, vision defective, mental labour irksome, the temper irritable, and the spirits depressed. In cases, again, where there is a sufficient amount of bile in the blood to produce jaundice, life sometimes becomes an actual burden. The very word 'melancholy' is simply a compound of the two Greek words 'black' and 'bile,' and one of the most distressing forms of insanity which is in general induced by it has been not inaptly christened 'melancholia.' Moreover, acute delirium and even profound coma are no unusual concomitants of bile poisoning."

A bilious person, then, is a bad subject for alcoholic indulgence. At first the effects of the stimulant are cheering and exhilarating; but later on the depression which succeeds is of marked character. The explanation is that in the bilious subject the brain-tissues, already weakened by the bile-poisoning process above alluded to, are more readily affected by the alcohol, even in small quantity, than are the tissues of the non-bilious brain. When the liver functions are set in order, the mental (*i.e.*, the brain) depression passes off. Dr. Harley holds that "The brain and liver disorders induced by alcohol thus appear to be as closely correlated as those of liver and kidney. The mere fact of a splitting headache following upon a debauch in the case of a strong healthy man, and a frontal or an occipital pain succeeding the drinking of a single glass of sherry in a nervously weak one, may be regarded, I think, as proof positive of the detrimental effects of alcohol on the nerve tissues, as well as lead us to suppose that it is most probably due to the compression of the nerve cells and fibres, which, as I have above tried to explain, may probably arise from the alcohol accelerating the heart's action, and thereby increasing the circulation in the intercranial vessels."

In directing attention to the effect on the nervous system, of exhilaration by alcohol, Dr. Harley shows that while alcohol produces such "pleasurable" sensations by stimulating the brain-circulation, we may note also that "when the amount taken is sufficient as to be ultimately able to lead to complete unconsciousness, the preliminary stage of the intoxication, which has been described by some as one of sweet *sans souci*, is simply the offspring of a blunting of the nerve sensibility—in fact, merely a partial or incipient stage of cerebro-spinal paralysis. Precisely in the same way as feelings of a pleasing calm are oftentimes felt to precede the total unconsciousness of refreshing sleep, and soothing sensations of agreeable beatitude have been described as their

feelings by persons who, after a lingering illness, have quietly and peacefully slipped away into eternity. In all of these cases the pleasurable sensations experienced are merely, I believe, due to the gradually increasing negation of nerve sensibility."

I fancy this blunting of nerve-sensibility, in chronic drinkers, may be traced out in many social directions and ways only too frequently illustrated in society at large. The change of demeanour, of character, and of tastes often exhibited by immoderate drinkers (especially noticeable in women) is thus to be regarded merely as a result of the negation both of that nervous and of that moral sensitiveness on which so much that makes up human character of the best kind depends. The connexus betwixt the mental and physical side of alcoholism, in relation to the nervous system is too clearly shown by Dr. Harley to escape even the cursory observer. There is a physical basis in truth, for the moral and mental effects of alcoholism, just as there is a physical side and lesion, often undiscoverable it is true, but present nevertheless, in the common disorders of the mind, which we class under the general name of insanity.

Finally, Dr. Harley deals with the effects of alcohol on the brain, acting, as it does, through its power of preventing the nerve-food in the blood from absorbing oxygen and giving off carbonic acid, and thus altering the nutrition of the nervous system. He tells us that "Alcohol does this exactly in the same way, though to a somewhat lesser extent than opium. This is well shown by the results obtained from a series of experiments I performed on the subject some years ago, a full account of which was laid before the Royal Society, and published in its Transactions in 1864, under the title of "The Action of Physical and Chemical Agents upon the Blood, with Special Reference to the Respiratory Process."

"The relative effects of alcohol and opium were found to be as follows:—

In 100 parts of air.	Oxygen.	Carb. acid.	Nitrogen.	Vol. at 0° C. and 1 metre pressure.
Composition of employed air	20.9	0.002	79.038	20.96
With pure ox-blood	10.58	3.330	86.09	14.91
+ 5 per cent. " of alcohol.....	16.59	2.380	81.03	18.97
With pure calf's-blood	6.64	3.47	89.89	10.11
+ '005 grms. of morphia ...	17.17	1.00	81.83	18.17

"A glance at this table suffices to show that alcohol, even in the small proportion of five per cent., exerts a powerful chemical effect on blood, so powerful as to entirely derange one of its most important functions—namely, the function of respiration. The alcohol seems to have acted like an asphyxiant, inasmuch as it has not alone diminished the power of the red corpuscles to absorb oxygen, but to exhale carbonic acid, and that too in the same way, though to a somewhat lesser extent than morphia does. This peculiar chemical action of the alcohol on the blood nerve-pabulum may be thought to give a reasonable explanation of the paralyzing action of alcohol upon the nervous system, seeing that oxydation is the motor power of all vital action, and in direct proportion to its activity are the manifestations of life accelerated or retarded. Every breath we draw, every movement we perform, every thought we think, is but the outcome of the transformation of matter under the influence of oxygen. If, then, it be true, as above shown, that alcohol possesses the power of preventing the constituents of the blood from being properly oxidized, and thereby fitted for the purposes of nutrition, it is easy to

account for its producing a chain of more or less well-marked neurotic symptoms terminating at last in coma and death."

Thus concludes one of the most important series of papers which, of late years, have been published on the alcohol question. If, as I have shown, Dr. Harley's words often apply with all force to the immoderate rather than to the moderate drinker, one may yet maintain that the strictly "moderate" man may find in the words of Dr. Harley much food for thought. Alcohol has, in truth, its own uses; but its abuses are terribly liable to creep into social life, to the disorder of health, and the shortening of life. It, therefore, behoves each rationally-minded person to examine well into his or her habits in the matter even of alcoholic use, to say nothing of the necessity for at once ceasing all abuse by the inculcation and practice, if need be, of total abstinence. What Dr. Harley has shown forcibly and well is that much disease is either of unsuspected alcoholic origin, or is increased by the unwise use of alcohol. On this ground alone there exists the greater need for the rigid personal supervision of life, and for the determination to be guided by wise medical advice in the matter of alcoholic use, where one's own unaided experience fails to afford sufficient data for the regulation of existence.

"LIKE BEGETS LIKE."

By DR. E. J. DUNGATE.

FIFTEENTH PAPER.

HEREDITARY TRANSMISSION OF CERTAIN DISEASES.

HEREDITARY predisposition to gout, rheumatism, consumption, scrofula, epilepsy, and some other diseases, is a strong part of the creed of every physician. When a physician finds a patient suffering from any one of those disorders he immediately attempts to give confirmation to his diagnosis by means of questions concerning the family history. Fernelius says: "Such as the temperature of the father is such is the son's, and look, what disease the father had when he begot him, his son will have after him, and is as well the inheritor of his infirmities as of his lands." People in more modern times than those of Fernelius have been well aware of the tendency to inherit disease; but the belief is generally vague, and reasoning on the subject is often illogical. Some, with very little show of reasoning, have even hinted that Napoleon III. could not be a Buonaparte because he did not die of cancer in the stomach.

A disease may be hereditary, and yet neither the father nor the mother have been affected by it; nor even their parents. Sir Henry Holland knew a family where three brothers were severally afflicted by paralysis at almost the same period of life, and he could find no record of the disease in the family. There was another family where three or four children suffered from epileptic fits, and there was no similar disease in the parents. He knew three cases of diabetes in brothers under ten years of age. In another instance there were four cases of disease of the heart resulting fatally in the children of parents who had not been subject to the disease. Sir Henry says: "As a curious variation of the same general conditions, a case is known to me where the children of parents, each deaf-and-dumb, are themselves free from that defect. In another large family I have known almost every child short-sighted, without either parent being so." There seems to be no definite law yet discovered concerning the transmission of deaf-mutism, and concerning the conditions of life of the second family which Sir

Henry mentions, he has given us no information. The commencement of a family disease is often a complete mystery; but of the existence of diseases which are distinctly hereditary there can be no doubt, for proofs are abundant. In the following paragraphs we shall mention the most important of such diseases, and give examples which may be of interest to the reader.

The transmission of leprosy has been recognized from very early times. "The leprosy, therefore, of Naaman shall cleave unto thee, and unto thy seed, for ever" (2 Kings v. 27). Sir James Simpson, in his "Antiquarian Notices of Leprosy and Leper Hospitals in Scotland and England," gives the following: "In the Burgh records of Glasgow for 1581, Patrick Bogle is ordered to be inspected for leprosy; and eight years afterwards (1589), 'Robert Bogill, sone to Patrick Bogle, is reported to be an inmate of the leper-house belonging to the city.'" Leprosy appears to be hereditary in the same sense that consumption is; that is, children of leprosy parents are more likely to become leprosy than the children of parents in whom there is no leprosy taint.

Pellagra, which is a form of ichthyosis (or fish-skin disease) is hereditary, although not contagious, and according to Professor Tomassini, it often occasions an irresistible impulse to self-destruction. Dr. Baillarger, in an address which is quoted in the "Journal of Psychological Medicine," 1848, mentions that many persons suffering from pellagra spring from insane parents, and many insane persons spring from pellagrose parents. He shows that the development of one or the other disease depends upon accidental causes. As a proof of this he gives the following: "A peasant of the neighbourhood of Bergamo has three children, two sons and a daughter. The eldest son and the daughter had, like the father, pellagra. The second son left the labours of the field, and became a servant in the town. He thus escaped the *erythema pellagrosa*, but was soon attacked by ambitious madness, and became paralytic.

Like cretinism, it has a local limitation, being characteristic of Lombardy. Sir Henry Holland, who gave special attention to the pellagra of Lombardy, says: "There are some districts in the Alto-Milanese where the *pellagrosi* form one-fifth or sixth of the whole population." When he visited the Lunatic Hospital of Milan he found that "out of nearly five hundred patients of both sexes, about one-third had been brought thither in effect of this disorder." A reviewer in the *Medico-Chirurgical Review* for January, 1863, quotes from Calderini and states that "of 184 families comprising 1319 individuals inheriting predisposition to the disease, 648 were affected and 671 were healthy; and it is supposed that the mother more generally conveys the disease than the father." The disease commences with a skin affection, and, after passing through various stages, results in a few years in either madness or death.

Very few diseases exist in which the power of hereditary taint is so well shown as in consumption. Sir T. Watson, in his "Practice of Physic," says: "We see whole families swept away by its ravages. Like other hereditary tendencies, it may skip over one or two generations and reappear in the next, just as family likenesses are known to do. Results of marriages amongst consumptive people are very disastrous. Lepers were formerly forbidden to marry, but the humane spirit of our age prevents us from trampling on the 'liberty of the subject,' and refusing to consumptive people the right to marry. Thus, as Dr. Bennet says, in the *British Medical Journal* for March, 1871, 'children are born tainted with constitutional weakness; very many of

them die teething or from children's diseases, or grow up merely to become victims to the same malady as their parents."

Consumption is more fearful than some other diseases because of the number of diseases which accompany it and follow in its train. Dr. Winn, in his work, "On the Nature and Treatment of Hereditary Disease," notices that a vicarious action of morbid forces is often seen in the same family, and even in the same individual. The cases which follow are examples of both:—

"Miss —, when fifteen years of age, had unequivocal signs of phthisis. Her brother was attacked with acute mania when he was nineteen; and another sister with epileptic fits at the age of seventeen. Two of their cousins and their aunt died of phthisis."

"Miss —, æt. nineteen. In this case the malady had been developed by a mistaken and fanatical zeal on the part of her religious instructors. Although her life had been one of the most perfect innocence and purity, she fancied herself wicked and sinful. She ultimately died of phthisis."

"Mr. —, æt. about twenty-five, consulted me for an attack of profound melancholia. He was one of a family of eight children. One sister and two brothers died of phthisis, two sisters died insane, and one sister (still living) is extremely eccentric; only one sister has escaped disease. The mother died of pulmonary consumption. The father, who had been in every respect healthy, died at the age of eighty-three."

Scrofula, if not directly hereditary, may be caused by conditions, which influence the parents and develop the tendency. The children of dyspeptic parents, and of very old or very young parents, commonly show a tendency to scrofula. An important cause is malnutrition, which may be a result of under or over-feeding.

A tendency to apoplexy ranks among hereditary diseases. Darwin mentions an instance of a woman who died of apoplexy at the age of sixty-three. She had two daughters, and they both died from the same disease. One of these had a family of twelve children, and they all died of an allied disease (tubercular meningitis). "Attacks of apoplexy," says Sir T. Watson, "are especially to be apprehended in persons whose ancestors have suffered the same disease. Accumulated experience has clearly ascertained that they who come of an apoplectic stock are themselves more than ordinarily liable to apoplexy."

Peter the Great, of Russia, suffered from epilepsy, which was hereditary, and showed itself when he was only five years of age. Peter was the son of his father's second wife. Ivan, a son of his father's first wife, was also attacked continually by epileptic convulsions. Mr. Sedgwick says: "In this case the epilepsy of the half-brothers, Peter and Ivan, sons by different marriages, was probably derived from a paternal ancestor." The following case has been quoted (*British and Foreign*

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Medico-Chirurgical Review, April, 1863) to prove the hereditary transmission of *acquired epilepsy*: "A man, who was not born epileptic, shattered the dorsal vertebrae in falling from the top of an oak; the result of this accident was a spasmodic contraction of the limbs, which lasted for years, and was not perfectly cured when he married; his son, on attaining the age of puberty, became epileptic."

Dr. Brown Sequard, by means of injuries, caused some guinea-pigs to be affected by epilepsy, and he found that their offspring were similarly affected. Dr. James Russell gives an example of hereditary epilepsy in the *British Medical Journal* for March, 1862. The father was healthy. The mother appeared a very nervous, excitable woman; one of her sisters died insane, but was not epileptic; a brother fell into an epileptic fit about a year before the commencement of the notes; and it is worthy of special observation that all the children affected with epilepsy, *excepting one*, together with the two youngest, who were clearly advancing towards the same sad event, and the eldest son, who had hardly escaped the disease, strongly resembled the mother, both in features and in complexion. There were nine children in the family. The eldest boy was almost insane, and the eldest girl suffered from several disorders; but neither was epileptic. The others all became epileptic at a certain age; the girls at eight or nine, and the boys at thirteen or fourteen.

In 1850, the English sparrow in America occupied the area of a single tree or tree-box. Now, he disports himself over an area of 885,000 square miles in the United States and 150,000 in Canada.

THE LONDON SKIN HOSPITAL.—Recently, at the Hotel Métropole, the First Annual Report of the Committee of Management of this Hospital was laid before the subscribers. The chair was occupied by the Marquis of Carmarthen, M.P. Letters of regret for inability to attend were read from Sir Richard Owen, K.C.B., Sir Alexander Armstrong, K.C.B., F.R.S., Dr. J. S. Bristowe, F.R.S., Mr. Ernest Baggallay, J.P., Mr. James J. Fellows, Agent-General for New Brunswick, and others. Amongst those present were the Rev. Geo. Blake Concanon, D.D., Mr. H. Oakley, Mr. Marks, Mr. Charles Pritchard, Mr. J. G. Albert, and several ladies. The Hospital was established in March, 1887, for the treatment of skin diseases amongst the poorer classes, and as a school for instruction in the science and practice of dermatology. The institution is entirely free to the necessitous, and also affords relief to those above that class who are unable to pay the ordinary medical fees. During the past year there were admitted 725 out-patients, who made 3,398 attendances. Many applications have been received for admission as in-patients, but at present the funds at the disposal of the Committee have not been sufficient to enable them to open an in-patients' department. The noble chairman made a strong appeal on behalf of the Hospital, and said there are liabilities amounting to £369, while the cash in hand and at the bank only amounted to £51 7s. 6d. This is mainly due to the preliminary expenditure. It was mentioned that the Hospital is almost entirely dependent on voluntary contributions.

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SALOL.

In a previous number reference was made to a new agent, called antipyrin, a coal-tar product used to lower fever, relieve pain, stop bleeding, and allay sea-sickness. The reader's attention is now called to a new drug, in connection with which some very strange phenomena are to be mentioned.

Salol is composed of six-tenths salicylic acid and four-tenths carbolic acid. It does not dissolve in the juices of the stomach nor in the intestinal secretion until after admixture with the pancreatic flow (*i.e.*, the juice from the abdominal sweet-bread). It is well known, to those versed in medical matters, that salicylic acid is a popular remedy for acute inflammatory rheumatism; and it is also a matter of general knowledge that carbolic acid, when applied to the tissues, burns. Salol, composed of these two agents, is more effective, it is said, in rheumatism than the former, and, strange to say, is, unlike the latter, free from poisonous properties, though excreted as salicylic acid and carbolic acid.

It is a very noteworthy feature that this drug is being employed to determine the presence or absence of certain diseases of the stomach, and by this means: As it is not dissolved in the gastric juice, the time that elapses before it appears in the kidney secretion of a healthy person has been carefully ascertained and found to be about an hour. Where a longer time intervenes before its appearance in the urine, the condition of the stomach is one of disease.

Salol is a safe medicine to reduce the temperature of the body in fever. As the fever subsides there is, as is usual in the lowering of the body-heat, some sweating; but not the exhausting sweats observed after some drugs. Further, when once the fever has been brought down with salol it does not rise to its old height again. The reduction is not followed by coldness, rigours, or chills. Usually in fevers there is a little tendency to nausea, or at all events a squeamish stomach. As salol is tasteless, and does not dissolve in the stomach, it appears to be about the best of all the drugs for fever.

"The first triumphs of salol," says one prominent writer, "were won in the treatment of acute rheumatism, excelling, as it apparently does, all other remedies in its power to abate pain and lessen fever. If all the conditions be propitious, by the end of the second or third day fever and joint pain and swelling will have disappeared."

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This new agent may be used in the form of powder dusted on ulcerated and catarrhal surfaces, but for internal administration nothing can compare for convenience and everything else with the "Tabloids," which contain five grains each. The dose of the Salol Tabloids is from one to three.

HOW TO STOP NOSE-BLEEDING.

THE blood-supply to the nose comes in part from arteries which run across the face in such a situation that they can be easily compressed against the bone. The finger, or a finger-shaped pad about two inches long, placed by the side of the nose, extending from the lower border of the upper lip upward, and pressed firmly against the face, will compress these vessels, and, if the bleeding is from tissue supplied by them, will entirely control it. This method can be used early, and, if necessary, again later on. The pressure must be firm and continuous, and the pad must fit into the curvature of the face. This procedure can be done quickly and easily, and is always worth trying. It is most likely to succeed where the flow of blood is profuse, bright red in colour, and seems to arise from well forward in the nose.

Pressure can be made on both sides of the nostrils, if one side is not enough. Other remedies are a few snuffs of ice-water high up into the nostril—hot water can also be used, but it must be very hot and had better be slowly injected with a Davidson syringe—or an injection of vinegar and water may be tried. Every mother is familiar with the application of a cold brass key to the nape of the neck or cold cloths to the forehead and to the back of the neck. Spirits of turpentine in a hot saucer will give off fumes which, snuffed up the nose, often have a good effect in this bleeding.

Tying a string or bandage around the thigh, or the arm close to the shoulder, is of service. An excellent remedy is to have the patient take a hot foot-bath. This is one of the best possible measures from its simplicity, and it rarely fails in all ordinary cases to stop the bleeding; another method is to apply a large mustard-leaf or mustard-plaster to the skin over the right side of the body in the situation of the liver.

If these simpler plans have been tried, and the hemorrhage still continues, a long plug of linen, shaped like a crayon with a more pointed extremity, after having been dipped in alum-water or vinegar and water, may be pushed gently up the nostril till about an inch of it is out of sight. If the nose still bleeds this is to be removed and a number of pieces of cotton tied to a string, so that they resemble a miniature kite's tail, may be pushed, one after the other, directly backward into the nostril until this place is packed full; the end of the string, with some cotton attached, which still hangs outside, is cut off, leaving an end by which the cotton pledgets may be pulled out. The first piece must be cautiously pushed as far back as possible by means of a slender lead-pencil, round end of hair-pin, or a long match. The cotton may be soaked in alum-water; if handy, in iron drops. If the cotton is not at hand, a long ribbon of linen may be made to answer, carrying one end back as far as possible, but not getting it out into the back of the mouth, and then pushing the rest of the ribbon little by little in after it. This packing may be left in till all danger of hemorrhage is over, or until the doctor comes and takes charge. This procedure requires considerable care and skill. If performed carelessly, it may make matters worse instead of better, and ought, therefore, to be reserved until the simpler measures have failed or when life is in immediate danger from loss of blood.

The position of the patient during nose-bleed is best recumbent, but it is difficult to keep children lying down at this time. If they sit up, they should not bend forward, as that obstructs the descent of blood in the veins of the neck, keeps the head and nose congested, and thus assists the bleeding. The collar or any constricting bands about the neck should be removed or

loosened. A change from a sitting to a recumbent posture will often stop the nose-bleed without resort to anything further in the way of treatment. It is strongly advised that, unless the case is urgent, the simpler means of treatment should be tried first, but a knowledge of the means available as above stated will give any one a sense of security in the presence of a most frightful hemorrhage from the nose, knowing that if the necessity arises it can be promptly and efficiently met.—*Babyhood.*

PRECAUTIONS IN BATHING.

As supplementary to the article in our last number on "The Cold Bath," the following remarks, culled from the *Lancet*, will be read with interest. The bathing season, though not yet advanced, has already been marked by the levy of that fatal tribute which year by year is exacted of the ignorant and the indiscreet. The recent death by drowning of a young man in the public baths at Poplar suggests one cause of accident which is too apt to be overlooked. The deceased had entered the water soon after partaking of a hearty meal, and the fatal result was attributed to cerebral congestion due to sudden immersion at such a time. What may have been the particular appearances observed after death in this case we have no means of judging, but it may be well to consider shortly some reasons why the practice of bathing soon after meals is justly condemned. Effusion of blood in or upon the brain, when it occurs in such cases as that already referred to, is probably not a primary cause of mischief, but rather a consequence founded on other circulatory and nervous disturbances. It is an evidence of eclampsia, and the physiological basis upon which this is founded consists in that inward diversion of blood towards the alimentary tract which characterizes normal digestion, the other tissues, notably the brain, being at the same time proportionally anæmic, and the action of heart and lungs impeded by a distended stomach. A natural result of cold immersion at this stage is to encourage or induce a tendency to syncope, to concentrate surface blood still more about the central organs, including the heart, which, especially if at all unequal to its duties, labours ineffectually to readjust the blood pressure, and finally succumbs with lungs and venous system engorged by passive congestion. It is as if an enemy occupied the outworks of a fortress left for a time unguarded, and forthwith paralysed the resistance of the citadel. It is best, therefore, to wait for at least an hour and a half or two hours after a good meal before bathing. Another danger to be avoided is that of cramp. This is particularly apt to occur after severe exercise or long immersion. The effect of cold being to prolong the contraction, while exhaustion lowers both the power and the elastic recoil of muscle, it is evident that we have in a combination of these forces all that is required for the production of this dangerous condition. The obvious warning implied in these remarks requires no further admonition to impress the fact that the bather in cold water must be economical of time and free from any appreciable signs of muscular exhaustion.

FERTILIZER FOR HOUSE-PLANTS.—Potassium carbonate, potassium phosphate, magnesium carbonate, sodium silicate, of each one part; potassium nitrate, two parts; sulphate of iron, three parts, in two thousand parts of water. A little of this solution poured occasionally about the roots of plants is said to greatly favour the growth of house-plants.

The Family Circle

"The child is father of the man."—*Wordsworth.*
 "In bringing up a child, think of its old age."—*Joubert.*

A WOMAN'S HOUSE.

If the men who build dwellings had the house-keeping to do in them afterward, a speedy change of plan would result. I should like to see the man who designed the room where this is written condemned to dust and keep its treble ogee mouldings nice, around double doors, three single ones and five large windows, to say nothing of the double moulding which finishes the baseboard on thirty-foot sides. The builder must have been fond of ogees, for a neat little one runs under each window-sill, for no earthly purpose I can divine but to furnish a surface for dust. From kitchen and pantry to attic every foot of casing in this ten-room house is finished with that tiresome moulding which offends every artistic sense in one, by being altogether too pretentious for a house where the amount of labour to care for it is any factor of account, as it must be in nearly all American homes. Not one servant in a hundred can be trusted to dust or clean such woodwork properly, and the time I have wasted in merely keeping those ledges free from offensive dust and fly specks in the last four years would have written a book, and the strength and nerve wasted on it in effort and vexation would have made that story a successful one.

It is so with detail after detail in this average suburban house. The window sashes, instead of strength and plainness, are fretted with a silly beading that takes double time to clean; the stair-railing is turned and sawed into ornamental intention, which makes the correctly trained eye ache with its poverty of design; every upright casing of dresser or washstand is beaded on each board or panelled to a distress; even the kitchen shelves and towel roller have worked brackets for the flies to sit on, and worst of all every door handle is embossed. When tired with a forenoon's effort in making this incorrigible house neat, I sit down and rest myself with planning how some spare season, when everybody is away from home, I will take chisel, wedges, and hatchet, and rip off every foot of that wretched moulding, every board of that tongued and grooved casing, and have them replaced by the plainest flat casing, with nothing more than a rosette in the upper corners by way of relief. Being of a thrifty turn, I shall sell that ogee moulding for a church or work it up into picture frames

and gild it, or else—Will some person with a clever head please tell me of any earthly use for that moulding, besides selling it to torment the soul of some other woman in a cheap dwelling house? That I never will do. It goes against my conscience.

Next the stair-railing will disappear for plain, solid, round turnings and the showy newel-post of semi-Egyptian character will be sawed up for the lathe, a plain, round post taking its place. The baseboard will be finished by the simplest bevel. The door handles will not leave the print of their heading and Greek fret on the palm of the hand that turns them. They shall be neither metal nor china—both are too cold—but of plain, turned wood or compressed paper, pleasant to touch, unobtrusive to sight, and easy to keep clean. The price saved on these fittings will be spent on window-sashes, plain, stout, and polished—not these machine-sawed things, so rough that the varnish does not fill the saw marks. Then I propose to have some painting done that will last to posterity. Like that which Mrs. Carlyle found in her father's house, as good as when it was put on in her little girlhood—work done to last, seeing there were eight coats of it! Then I will have time enough from house-keeping to learn Greek and embroider the set of chair covers I desire to leave my heirs. There will be comfort living in such a house.

While I am about it, I think it well to have the house moved back from the street, and when it is moved it had better have some alterations made. Best of all will be to pull it all down and build it over. I've been planning that little new house for ten years, studying one detail after another—hall, staircase, closets, and fireplace—always with one idea of plain, attractive, homely comfort and use. There shall not be a line about it for ornament; every feature shall be studied for pure use and convenience, yet the whole expression be such homelike grace and content that passers will turn to look so far as they can see it.

I know a few such houses—mostly dating back of the century—sunny, sheltering places, only to be fully described by the epithet "homely," in its ancient, lovely sense, "homelike." In this country, where the newest fads in building are tried to excess, where the sky-scraping roofs of parrot-coloured houses offer the least comfort with the greatest expense, in summer drives one comes upon weather-beaten, hip-roofed cottages fronting south on some gentle slope, that are very dove-cots in aspect, and, seeing, one sighs, "Oh, for the homely houses!"—*Shirley Dare* in "*Carpentry and Building*."

Highest Award, Only Gold Medal, London, 1884.

GRANT'S SCOTCH OAT-FLOUR.

ESTABLISHED 1813.

CRAIG MILLS, DUNDEE.

"11, Mount Vernon-road, Liverpool.

"Being very much interested in the 'Food Question,' I buy all new things. Some are born only to die, others live out a useful life, and to this latter class Grant's Scotch Oat-Flour belongs. It is an admirable preparation of oats, giving all the nourishment without the roughness of oatmeal. Porridge, Puddings, Blanc-mange, and Biscuits are excellent made from it. I can, therefore, confidently recommend it to the healthy, because it will keep them in health; to the delicate invalid, because it will restore health; and to children, because it will lay the foundation of a sound and healthy life. To vegetarians it is invaluable. The ease with which it is prepared is by no means to be forgotten.

"ISABELLA THWAITES."

ARSENIC POISONING AND MOTHER'S MILK.

DR. BROUARDEL, Professor of Medical Jurisprudence at the Paris Faculty of Medicine (says the Paris correspondent of a medical contemporary), was lately consulted by the Tribunal Court on the question as to whether an infant of twelve months could have been poisoned by the milk of its mother in the case where the latter had absorbed arsenic.

The following are the circumstances which caused this inquiry. A man having been accused of forgery with the intention of appropriating to himself the fortune of his wife and that of his mother-in-law, was, at the same time, suspected of trying to poison his wife, and having thus caused the death of his child, which the mother was suckling at that time. The child died with symptoms of cholera a few days after the mother had herself presented analogous symptoms, such as diarrhoea, vomit-

ing, &c. As it was during the hot season, these accidents did not excite attention. It was only after the second choleric attack, which occurred in November last, at the same time in the mother and grandmother of the child, that the husband was suspected. On the other hand, the wife declared that she had found in her husband's pocket a white powder, which was nothing else than arsenious acid.

To resolve the question, Dr. Brouardel caused the coffin containing the body of the child, which had been buried about six months, to be brought to Paris. This body was completely transformed into cadaveric fat, and it was impossible to isolate the viscera from the other parts, so that it was submitted to analysis in its entirety. It weighed about two and a half kilogrammes, and contained five milligrammes of arsenic, which did not proceed from the linen enveloping the corpse, or from the earth surrounding the coffin. It was necessary, in the second place, to know whether arsenic was eliminated by the milk.

M. Gabriel Pouchet, an eminent biologist, had performed certain experiments in this direction, which were very conclusive. He caused a certain number of wet-nurses, who were patients at the St. Louis Hospital, who were affected with skin disease, to take a certain quantity of Fowler's solution (from two to twelve drops per day), and he was able to ascertain that under these conditions the milk of these nurses always contained a relatively considerable quantity of arsenic; thus the milk of one nurse, who took in six days eight milligrammes of arsenic contained one milligramme of that substance to one hundred grammes of milk.

It must be added that with these doses the nurses and their infants did not appear to be affected by any accidents. But this does not prove that this would have been the case if the arsenic had been given at once in a single dose. In order to clear up this last point, recourse was had to experiments on female animals. This last series of experiments did not give conclusive results, because the animals presented a very variable susceptibility to arsenic, and the experimenter found it impossible to come to any conclusion concerning these experiments as compared with those performed on human beings. It is, however, evident, from these researches, that the lactic secretion is a means of elimination by predilection for arsenic, and that it is prudent not to administer this agent to suckling mothers.

In the particular case under notice, in responding to the Juge d'Instruction, Dr. Brouardel stated that the body of the infant contained a sufficient quantity of arsenic to cause the death of a child of one year, and that this arsenic may possibly have had for vehicle the milk of the mother. This qualified conclusion did not seem to affect the defence or the accusation, and the husband was condemned to twenty years' hard labour.

To take impressions from seals, proceed as follows: To take an exact model of any coin, medal, embossed stamped paper, or, in fact, any device raised or imprinted, cut a piece of cardboard, with which form a ring just the dimensions of the impression to be taken, then pour within the said ring melted fusible metal. The carding will prevent the metal from running away, and in a few minutes it will cool, and the impression taken will be the same as the original, but reversed. Fusible metal is a compound of eight parts of bismuth, five of lead, and three of tin, which liquefies at the same temperature as boiling water.

Public Health

"Health is the first Wealth."—Emerson.

MEAT-POISONING.

By JOHN A. CHESNEY, M.D.

It has long been known that meats of all kinds were poisonous under certain circumstances and conditions, not until lately well understood. For the last hundred years medical literature teems with reports of instances of meat-poisoning, some of these reports being absolutely appalling in the amount of suffering and loss of human life believed to have been so caused, and without offering one word in explanation of the cause other than venturing the surmise that the beast was diseased when killed or the meat was decomposed.

Perhaps from the earliest ages to the present time meat poisons of various kinds have been dealing death freely and indiscriminately to our kind without their existence being suspected until within the past few years.

A little over fifty years ago our entire knowledge of this important subject consisted in a knowledge of the fact that animals which suffered from certain contagious and sporadic diseases, such as pleuro-pneumonia, foot and mouth disease, rinderpest, malignant pustule, and dropsical affections of heart or kidney origin were unfit for consumption, and that decomposed or putrid meat acted often as an irritant poison.

As lately as 1832 trichinæ-spiralis (small parasitic worms) were discovered in pork, and this discovery has resulted in avoiding a world of human suffering and saving many valuable lives. The remedy is pointed out, and trichinosis should now be a thing of the past.

In 1844 the discovery was made that the human subject contracted tapeworm from the underdone meat he consumed. Here also the remedy is plain, and has resulted in great benefit to the race.

It has also been demonstrated that canned meat is often poisonous, not only from the lead used in soldering, but from the tin itself, and that, too, of tin of good quality. That hams become contaminated from the colouring matter of the sacking in which they are contained. Many more sources of contamination might be enumerated.

But it is only very recently that we have begun to understand the most virulent, the most common, and the most fatal of all meat poisons—the poisonous alkaloids or ptomaines contained in meat under certain circumstances.

It has long been known that decomposed meat was poisonous, but this knowledge was too indefinite to be of much practical utility to the sanitarian or toxicologist.

It is only of late years that it has become known that a short time after the death of an animal there may develop in the body certain poisonous and non-poisonous alkaloids, the chemical and physiological action of which resembles that of the poisonous vegetable alkaloids.

As early as 1853, Schlossbarger made a discovery of organic substances in the products of decomposition. Then Marquard separated a base; but it remained for Selmi, an Italian, to discover these alkaloids, separate them, name them ptomaines, and give their chemical and physiological actions. This was in the period from 1870 to 1877, and since that time new discoveries have been continually made, their nature and properties have been more closely studied, until we seem to have obtained a

What Kills Englishmen.

THERE are a few facts that every man in this country will do well to ponder.

They are more important than any merely social or political question. *How* we are to live is of small consequence, when it is a matter of doubt whether life is going to be worth living at all—much longer. Here is the plain truth, as anybody can find out for himself on easy investigation.

The average of life in this country is decreasing every year. Sudden deaths from nervous collapse among our business, professional, and public men are so frequent as scarcely to excite remark. The majority of suicides, committed without apparent reason, or under so-called "depression of spirits," are really prompted by nervous prostration, which is a fruitful source of insanity and crime with all their grief and horror.

These facts are startling. They threaten the very life of the nation. They assail the springs of its power and prosperity. They wreck manhood's strength, and woman's usefulness and beauty.

Everyone should know the causes. What are they? The answer is easy and terribly plain: Our unwise and irregular eating and drinking; the intense mental and physical strain arising from our mad race after money, position, and influence; the fears and struggles of poverty; the use of narcotics and stimulants; our fashion of turning day into night and night into day; and, briefly, our desperate willingness to pay any price for an hour's pleasure or success. So we burn life's candle at both ends, and fill the lunatic asylums and the graveyards.

The disease from which we suffer and die is, in plain English, *Nervous Dyspepsia and Prostration*, as it is seated in the Nerves and in the organs of Digestion, Assimilation, and Nutrition. Healthy digestion being impeded or destroyed,

the whole body, nerves included, is *literally starved*; even when there is no emaciation to tell the sad story.

Nervous prostration sends out its warnings:—headache in the morning; a persistent dull heaviness or aching at the base of the brain; wakefulness; loss of appetite and disgust with food; loss of mental energy and interest in ordinary duties and business; restlessness and anxiety without any assignable reason; eructations; bad breath; foul mucus on the teeth; occasional giddiness; palpitation of the heart; sallowness of the skin; coated tongue and gradual failure of strength and ambition.

The remedy is a total abandonment of the habits and customs which cause the disease in each individual case, and the use of Mother Seigel's Curative Syrup to cure the mischief already done. This great remedy is especially adapted to eradicate Nervous Dyspepsia and Prostration. To do this it acts directly and gently, but powerfully, upon the disordered stomach, liver, and kidneys, restoring their tone and vigour, promoting the secretion of bile, expelling waste matters from the system, and purifying the blood.

Upon the nervous system Mother Seigel's Curative Syrup acts as a safe and wholesome anodyne without the slightest narcotic effect, and then leaves the nerves to regain their natural tone and strength through its wonderful influence upon the function of nutrition.

It is safe to say more nervous dyspeptics have been restored by it from the depths of misery to a fresh enjoyment of life and labour than by any or all other forms of treatment combined.

Mother Seigel's Curative Syrup is for sale by all chemists and medicine vendors, and by the proprietors, A. J. White, Limited, 35, Farringdon-road, London, E.C. Price 2s. 6d. per bottle.

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LAVENDER WATER.

THE supreme excellence of this Water is testified to by all who use it, and is specially recommended by the Medical Profession for sponging all irritated parts, especially in the case of Skin Eruptions; it is not only a Royal Perfume of the highest class, but gives instant relief from the most violent irritation.

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BAYLEY & Co. having submitted this Ink to every known test, and the severest trials in domestic use, can fully assure the public that it far surpasses in quality every preparation of the kind within their knowledge, and that this Ink is really indelible. Price 1s. 6d., and in Cases, 2s.

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Otto of Rose.
Ess. Bouquet.
Violet. Sandal.
Almond.
Brown Windsor.
Glycerine.
Honey.
Cold Cream.
Highly recommended
for their pureness.

BAYLEY'S REMEDIES.

THE TRUE POMMADE DIVINE.

THE great usefulness of this excellent Remedy, the POMMADE DIVINE, is so well known to all who have ever applied it, that no Encomium is necessary, and to those who are yet unacquainted with its virtues, a trial in the following cases will be its best recommendation:—

It is good for all sorts of Pains, Swellings, and Bruises occasioned by Falls, or otherwise, and will prevent the many bad consequences of such Accidents.

For a Cancer before it is broke, and for all sorts of Sore Breasts, particularly in a Lying-In.

For Stiff Necks and for Swellings occasioned by the Evil.

For a Gangrene, melting a little in a wound, without using a tent.

For Pains in the Stomach, rubbed in before the fire.

If a little be well rubbed in for a few minutes on a Bruise or Pinch, it will prevent Blackness. Will also cure Scalds and Burns, applied directly; and Rheumatic and Gouty Pains fixed in any part.

N.B.—No woollen of any kind should be applied to the parts affected, nor any metal (except silver) touch the PommaDE. It will retain its virtues many years, and is therefore very useful to all Travellers, particularly Gentlemen of the Army and Navy.

HÆMORRHOIDS (or PILES).

As highly useful family medicines for that most distressing of complaints, Hæmorrhoids (or Piles), Bayley's Remedies have long enjoyed a high reputation. These remedies consist of specially prepared Pymont Tablets for invalid use, and of a Pymont Liniment for outward application. The tablets are compounded on the principle of the famous Pymont waters, which have been so highly recommended in cases of liver complaints, to the presence of which piles are often due, as well as in cases of the latter ailment itself. The liniment is made on allied principles. From an examination of these tablets and of the liniment, we are able to assert that they contain nothing calculated to produce untoward effects in the most delicate constitution, while they are likely to prove most beneficial in mild and severe cases alike. The ease with which the remedy may be taken—the tablets being agreeable to taste, and being merely allowed to dissolve in the mouth—will recommend this preparation in the eyes of those especially who have run the gamut of the many drugs employed for the cure of hæmorrhoids. We recommend a trial of Messrs. Bayley's Tablets, &c., which are to be obtained at 17, Cockspur-street, London, W.—*Vide HEALTH, April 8th, 1887.*

Prepared by BAYLEY & COMPY., Perfumers,

THE OLD CIVET CAT, 17, COCKSPUR-STREET, LONDON.

PRICE LISTS FREE ON APPLICATION.

fair knowledge of them. But developments in private practice continually remind us that we are far from being accurately informed as to the circumstances of their formation, and it is the object of this paper to offer an addition to our knowledge upon this branch of the subject, by relating a few cases that have occurred in the writer's practice, and which seem to offer some rather surprising features.

At 5.30, on the evening of November 1st, 1886, I was called to see Mrs. K—, who had been suddenly taken violently ill. While apparently in her usual health, she had been suddenly seized with intense pain in the abdomen, and extreme nausea, from which she fainted, and had just recovered from the fainting fit when I arrived. I found her retching and vomiting, bowels moving every few minutes, and suffering from intense pain in the abdomen. Pulse 120, and at times almost imperceptible; pupils slightly dilated, skin pale and moist, with profuse perspiration, intense thirst and a feeling of constriction about fauces. She complained of intense pain in frontal region, of cold hands and feet, and cramping of long muscles of extremities. She first vomited contents of stomach, containing a quantity of meat entirely undigested, and emesis continued throughout the entire night, the vomited matter consisting chiefly of mucus. The bowels also continued to move occasionally and were irritable and painful during the entire night. These symptoms all continued with less violence until next morning, when they gradually were controlled, leaving her weak and prostrated, temperature remaining normal.

In perhaps fifteen minutes after my arrival, and while busily employed restoring Mrs. K—, a nephew about five years of age became suddenly sick with exactly the same symptoms, except that his condition did not approach that of collapse so closely as did that of Mrs. K—, vomiting, purging, and abdominal pain being the most prominent symptoms, and these yielding to treatment much more promptly. Pulse was accelerated and weakened, pupils remained nearly normal in size, frontal headache not so severe, and perspiration not so profuse; emesis as violent, but bowel disturbance not so marked, and no cramping of extremities; temperature also remained normal.

The husband, who had been hastily summoned from his office, reached home at about the time of my arrival at his wife's bedside. He had been attending to his customary duties during the afternoon, and had not noticed but that he was as well as usual. A few minutes after the nephew was taken sick, Mr. K— was taken violently ill in the same manner and fainted. He was assisted to bed, and immediately developed the same symptoms as those of his wife and nephew, but greatly intensified. Emesis was violent and almost constant, and bowels moved continually; abdominal pain was intense. He passed almost immediately into a state of semi-collapse. Pulse became 130 to 140, and exceedingly weak, skin cold, pale, and bathed in profuse perspiration; pupils largely dilated, extremities cold, and cramping of all the muscles of extremities; intense thirst and constriction of throat; voice became hoarse or husky, and suffering from intense pain in frontal region; temperature 97 degs. As was the case with Mrs. K— and the nephew, the first matter vomited consisted largely of undigested meat.

Under the free administration of opiates and stimulants hypodermically, the symptoms of all gradually subsided somewhat, but continued with less intensity throughout the night.

The boy, recovering soonest, was up next day. His tongue was red, stomach somewhat painful and irritable, and he was weak and dizzy, with no appetite. Mrs. K—'s condition next day was not so good. Head ached, tongue was red, stomach painful and irritable, but retained small quantities of lime-water and milk. She continued to improve, being entirely recovered in five or six days. Mr. K— was in much the same condition, except weaker. His stomach regained its tone more rapidly, however, and he had regained his customary health in a week.

Suspecting that some irritant poison had been ingested, perhaps, with the food, a thorough inspection of the larder and cooking utensils was made, but nothing suspicious was discovered. They had used no new cooking utensils, and no new article of diet had been purchased except a small veal steak, which they had eaten for dinner. The servant-girl had eaten none of the veal, but had eaten of all the other dishes upon the table. It was then discovered that they were sick exactly in proportion to the amount of veal consumed, the servant-girl being exempt. This was satisfactory evidence that the veal was in some manner poisonous. A specimen of the meat could not be secured, as it had all been consumed, and the ejecta of the patients had been disposed of by the nurses. I then purchased specimens of the veal at the butcher's, satisfying myself that he had only the one veal in the shop, and examined it microscopically without detecting anything abnormal. The usual tests for fermentation and decomposition were also applied without showing anything wrong. A list of customers who had purchased veal at the shop during that day was procured, and it was discovered that they had all partaken of it with no bad results. I also ate of it myself, and found it to be wholesome. The history of those particular pieces which had been sold to Mr. K— was then traced closely, with the following result:

The calf was eight weeks old when killed, and was, so far as known, in good health. It was butchered at 6 p.m. Saturday, brought to the shop, and allowed to hang for four hours in the open air to cool, and was then placed in the cooler or ice-box, where it remained till Monday morning. Monday morning, after selling some veal from a hind-quarter, two steaks were cut off and laid upon the marble slab to await a customer. This was between 9 and 10 a.m. At 12 noon Mr. K— bought these two steaks, which had lain there for perhaps two and a half hours, and took them home, where they were immediately fried, well done, and at 12.30 all ate of them except the servant-girl. The man who purchased the first steak off this quarter was not affected by it, nor were those who ate the succeeding steaks. It then became clear that these pieces of veal became contaminated during the time they were exposed upon the counter, or during a period of from two to three hours. It was impossible to discover any possible means by which they could have been contaminated by outside influences, and as the toxic effects were in exact accord with those of one of the ptomaines, we are forced to the conclusion that the poisonous effects were produced by that alkaloid of fermented meat which resembles atropine and hyosin in its effects.

(To be concluded.)

DRYNESS OF WALLS, &c.—One observer lays a very thin slip of gelatine against the object. If this is not thoroughly air dry, the gelatine becomes curved, with its convexity toward the object.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

Wood that will not Blaze.—At the request of the Belgian Minister of Public works, says the *Journal of the Society of Arts*, M. Boudin and M. Donny, professors at the Ghent University, have conducted a series of experiments and investigations in connection with rendering wood inflammable. The following *résumé* embodies the conclusions at which they have arrived. Although wood cannot practically be rendered so fire-proof as not to be destroyed by heat, it is very possible to deprive it, to a considerable extent, of the property of catching and communicating fire; and to this end it is sufficient to coat the wood with a suitable composition. It is not, however, sufficient that this composition or substance possesses in a high degree the property of rendering wood unflammable; it must also fulfil other conditions. The treatment must not involve an expense out of proportion with the purpose to which the wood is applied, nor should the process be such as to delay the rapid execution of the works. Nor should the substance employed be liable to attack any metal parts which it may be necessary to use with the wood. The process should also be of easy application, with a brush, for instance, the only manner in which it can be applied to existing structures. The wood thus coated should present a neat and tidy appearance, and should also be capable of receiving a coat of ordinary paint over the fire-proofing composition; nor should one or the other coat be subject to alteration after a moderate lapse of time. It follows from the above considerations that wood cannot be rendered incombustible, or, more strictly speaking, non-alterable by heat; but its non-inflammability may, to a considerable extent, be insured, so as to preserve buildings from a limited and temporary fire—at any rate until assistance arrives. The methods of preserving wood against fire are of two kinds: The injection of saline solutions, and the application of a paint or coating. The former appears but little practical. In the majority of cases coating with the brush is the only practical solution of the question, and the substances most to be recommended for use in this matter are cyanide of potassium and asbestos paint.

♦ ♦ ♦

Ventilation of Board Schools.—Light and air are essential conditions to growth and good brain work, especially for school-children. If we wish to make children like and respect our schools, we must make them more attractive than the dull and too often squalid homes from which they come to their daily lessons. Good ventilation is always possible; for besides the ordinary means of natural ventilation, there is always the possibility of mechanical ventilation. The baneful effects of foul air are very obvious in some schools, where we have seen groups of children presenting the signs of exhaustion from this cause—the pale faces, dull eyes, and restless movements indicating only too plainly the distress caused by want of free supply of oxygen, and accounting for the inattention complained of by the teachers. This cause of exhaustion is easily removable by proper ventilation, and by preventing over-crowding; this is a state of things that must not be confounded with over-pressure from lessons; no child can work well unless there be elbow-room, and plenty of light and air

around. It is very desirable to train children in our primary schools to value cleanliness, but this valuable lesson will not be efficiently instilled into the young mind without the supplies of fresh air and light which are needful to invigorate their nerve-system. The mental and bodily exhaustion which arises in a school from want of sufficient ventilation is too often visible, not only in the children, but also in the teachers; those of us who have worked many hours in ill-ventilated out-patient rooms know how hard it is to maintain complete intellectual activity and amiability to all around in crowded rooms that are wanting in fresh air. Cases of anæmia among female teachers and in the pupils may often be attributed to want of sufficient light and air in school-rooms, rather than to too many hours of work. Education ought to teach practically the laws of health, and should be undertaken under healthful conditions, for the final educational aim should be *mens sana in corpore sano*.—*British Medical Journal.*

♦ ♦ ♦

Cool Sitting-Rooms in Warm Weather.—The influence of glass in conducting solar heat is too familiar even to dwellers in our temperate climate to call for detailed explanation. Of the advantages which it possesses in virtue of this quality we are not slow to avail ourselves in the business of plant cultivation, and in this case we are no less careful to moderate its possible excesses by protecting blinds, and other means towards the same end. It would be remarkable if, with all our care, our personal comfort were not similarly considered. We find accordingly a variety of arrangements now in use, either indigenous to this country or imported from the code of custom approved in warmer climates, though our originality in this respect is not great, and we still rely for the most part on the interposition of an inside roller-blind. A venetian thus disposed is indeed no contemptible screen. The ordinary roller-blind, on the other hand, is for the purpose intended comparatively useless. We may here mention, however, a simple suggestion, made long ago but recalled by a contemporary, which, if it does not promise an exact relation between the measure of comfort and of æsthetic effect obtained, at all events deserves attention on account of its comparative efficiency and its ease of application. According to this plan, the upper window-sash is lowered, and the inside blind is then placed outside and secured in position by passing its tassel cord beneath the lower sash. Thus the window glass is protected from the direct rays of the sun, and is cooled at the same time by the current of air which passes between blind and window. We would recommend this plan as an expedient worthy of trial during the warm weather, which no doubt will soon be upon us. Combining as it does an effectual method of ventilation, with a ready means of reducing temperature, it might be used with advantage in hospital wards.—*Lancet.*

It is reported that in Peru and other parts of South America this year's fruit has been avoided by birds, while it has caused the death of sheep and cattle when fed to them in large quantities. These observations have been cited as tending to show that the instinct of birds, with respect to the wholesomeness of fruits, is frequently a worthy guide for human beings to follow. The possibility is suggested that the variation in the fruit of different years may have something to do with outbreaks of cholera.

IMPORTANT ANNOUNCEMENT.

BONUSES TO SUBSCRIBERS TO "HEALTH."

HEALTH, as our readers are aware, may be obtained of all Booksellers and Newsagents, and at the Railway Book-stalls, on the day of publication. It may also be ordered from the PUBLISHER, 2, Paternoster-square, London, E.C., who will send the journal, post free, for a year, on receipt of postal orders for 10s. 10d.

As many of our readers who live in remote districts prefer to obtain HEALTH from the Publisher direct, and as we are desirous of increasing the already large number of subscribers who give us a yearly order for the journal, we offer the following FREE GIFTS and BONUSES to all who subscribe to HEALTH for one year or longer:—

(1.) To each Subscriber who remits 10s. 10d. to the Publisher, entitling him (or her) to receive one copy of HEALTH, post free, for one year, we shall present a copy of Dr. Andrew Wilson's work, entitled "A Manual of Health Science" (Longmans & Co.), value 2s. 6d.

(2.) To each subscriber who remits 21s. 8d., entitling him or her to receive two copies of HEALTH weekly, post free, for one year (or one copy for two years), we will present Dr. Richardson's "Ministry of Health" (Chatto & Windus), value 6s. The copies of HEALTH so ordered may be posted to separate addresses.

(3.) To each person who subscribes 32s. 6d., for three copies of HEALTH, post free, weekly, for one year, we will present the volume by Dr. Richardson mentioned above, and also the handsome, illustrated book entitled, "Studies in Life and Sense," by Dr. Andrew Wilson (Chatto & Windus), value 6s.—being a free gift of the total value of 12s.

The bonus last mentioned will also be presented to any one who succeeds in obtaining three yearly subscribers to HEALTH, and who remits to the Publisher the sum of 32s. 6d., together with the names and addresses of the persons to whom the copies are to be posted each week.

As the literary gifts above-mentioned constitute books containing solid and reliable information regarding health and other matters of popular scientific interest, it will be seen that the above scheme, while intended to increase our already large circulation, also offers distinct advantages to new subscribers who guarantee by their subscriptions a year's support to this journal. All communications regarding subscriptions and other purely business details connected with HEALTH should be addressed directly to the PUBLISHER, 2, Paternoster-square, London, E.C., and not to the Editor.

Our Letter-Box

"Conference [maketh] a ready man. —Bacon.

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. Those intended for the Publishing Office to be sent to MR. A. P. WATT, THE PUBLISHER, at the same address.

LETTERS TO THE EDITOR.

THE MENTHOL CURE OF CONSUMPTION.

SIR,—I also am one of the "great family of consumptives," and have experienced much benefit from the above treatment. Ten days ago I began it, with the following result:—The cough has almost ceased, expectoration is not one-twentieth of what it was and is nearly healthy in appearance, and the night sweating is now trifling in amount. I can easily and comfortably sleep sixteen hours at a stretch, my appetite has greatly improved, and, of course, I have gained markedly both in strength and weight, though I am still both weak and wasted. I have the utmost confidence in the menthol cure, and believe that by it my life will be prolonged. All honour to Dr. Beehag for having introduced this method into Britain.—Yours faithfully, J. H. TARBET.
Bendutha, Port Glasgow, N.B.

[We may add that the idea of using menthol in consumption (see HEALTH, No. 269, p. 134) originated not with Dr. Beehag but with Dr. A. Rosenberg. Dr. Beehag merely confirmed Dr. Rosenberg's ideas and practice.—Ed. H.]

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and not to the Editor.]

REMOSE.—Wash the parts night and morning with Bayley's Spermaceti Soap (17, Cockspur-street, Pall-mall, London, S.W.), and avoid alcohol for a time. You suffer from a form of herpes, which is a common form of skin-ailment. Apply a little Hazeline as a lotion to the parts after washing.

ROW.—There is no such period in human life as "a grand climacteric." The phrase is meaningless, unless there is meant to be indicated thereby simply the prime of life. After the age of, say, 50, a healthy man begins to decline (often imperceptibly for years) in strength and vigour. There are no special rules for

NERVOUS EXHAUSTION.

PULVERMACHER'S World-Famed GALVANIC BELTS for the Cure of

NERVOUS EXHAUSTION and DEBILITY, have received testimonials from three Physicians to Her Majesty the Queen, and over Forty Members of the Royal College of Physicians of London.

The distressing symptoms of NERVOUS EXHAUSTION and DEBILITY are speedily removed by means of PULVERMACHER'S world-famed Galvanic Belts, which are so arranged as to convey a powerful electric current direct to the affected parts, gradually stimulating and strengthening all the nerves and muscles, and speedily arresting all symptoms of waste and decay.

Dr. VINES, Fellow of the Royal College of Physicians, writes 19th September, 1885: "Having used MR. PULVERMACHER'S BELTS for many years, in the course of medical practice, I am in a position to speak of their great value as a curative agent in cases of nervous disease or functional malady where Electricity is likely to be serviceable. I am entirely convinced of their efficacy."

Dr. C. HANDFIELD JONES, F.R.C.P., F.R.S., Physician to St. Mary's Hospital, says: "I am satisfied that MR. PULVERMACHER is an honest and earnest labourer in the field of science, and I think he deserves to meet with every encouragement from the profession and scientific men."

Dr. GOLDING BIRD, M.D., Physician, Guy's Hospital, says: "I can hardly recommend MR. PULVERMACHER'S INVENTION too strongly to the notice of my medical brethren."

For full Price List and particulars, see New Pamphlet, "GALVANISM: Nature's Chief Restorer of Impaired Vital Energy." Post Free from

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attaining old age save those of strict attention to the general health, and avoiding all preventible diseases due to excess in foods and drinks. Plenty of fresh air and exercise, work of moderate kind, and simple food constitute the conditions favourable to old age.

SHORT O' PUFF.—We have no confidence in the nostrum you name. It professes to do too many wonderful things in the way of cures to merit belief in its virtues.

F. W. L.—If you are a smoker, avoid tobacco for a time. Such symptoms as those you name are often caused by over-indulgence in tobacco. If due to other causes, try the effect of inhaling at bedtime the vapour of a pint of hot water to which a teaspoonful of Friar's Balsam has been added. Cold or tepid sponging to your chest, with brisk friction thereafter, each morning, may also do you good. If not cured, write again.

A CLERK.—What you name is probably due to some interference with digestion. There is no evidence that the nervous centres are concerned therein. Our advice to you is to attend narrowly to your digestion, and to avoid exertion after your meals especially. A dose of Lamplough's Pyretic Saline taken in the morning or when you feel the symptoms in question will probably relieve you. Avoid exertion, of course, and continue your temperate life.

MARTYR.—As you are near the Isle of Man you might try that resort for your holiday: Blackpool might also suit you, if not too relaxing. For the relief of the symptoms you name, we recommend you to take a couple of Cascara Tabloids (Burroughs, Wellcome & Co.'s)—to be had of any good druggist—or twenty drops of Cascara Cordial at bedtime. In addition, limit your flesh food, and take less tea and coffee, substituting therefor Grant's Oat Flour, and making vegetables an important part of your diet. By attention to these rules you will probably overcome your symptoms. If not bettered, write again.

TEA.—See and follow advice given to "H. H. B." in last week's HEALTH.

A. H.—You violate Rule 2 for Correspondents given each week at top of "Letter Box" pages, in that you forward your enquiry to an address other than that of the office of HEALTH. If you choose to attend to our rules and direct your letter properly, we shall reply thereto.

VIXEN.—1. The use of arsenic, save under medical direction, is always fraught with danger. To use this drug merely for cosmetic or toilet use is quite as dangerous and very absurd. Arsenic besides does not invariably act as its votaries appear to believe—in giving a clear complexion. The care of the skin is a matter quite distinct from drugs and drugging. 2. Take plenty of nutritious food, and take also a little stout or Bokol each day to dinner. In many persons, bear in mind, thinness is perfectly natural. 3. The water you name would not have the effect you mention. It is simply a common tonic water. 4. Wash the feet night and morning with salt water tepid; and thereafter dust upon them Woolley's Sanitary Rose Powder (see advt. in our pages). 5. Apply to the French Hygienic Society, 56, Conduit-street, London, W., for a harmless dye. Glad to advise again, if necessary.

A. H.—Such magnetic appliances as you name are of no avail. Continue your cold bathing, and try the tonic recommended to "Porthos" in the present number. You suffer from no malady at all; but it is, of course, probable that the special circumstances of your life may have much to do with your discomfort.

SCOTLAND.—Try the lotion recommended to "P. S." in last week's HEALTH. Keep the hair short for a time, and wash it once a week with Bayley's Spermaceti Soap and tepid water.

E. C. S.—Your first care should be to secure healthy digestion. Your indigestion is really at the root of your other troubles. Follow the advice given to "Martyr" in the present number regarding diet and the use of Cascara. For the catarrh, see advice given to "Porthos" in the present number. Wear a suspensory bandage, and bathe the parts with cold water night and morning. You require no tonics, but simple attention to diet.

OMEGA.—It would likely prevent the curdling of milk, but it would be inadvisable to take the lime water constantly. Try a little soda water instead, and add this to the milk.

TO FLOW.—Give the patient the Cascara Tabloids recommended to "Martyr" in the present number. One or two of these taken at night will probably relieve the symptoms, but the diet must also be light. Scott's Oat Flour should be given in place of tea and coffee, and a vegetable diet in part should be also tried. As a local application to relieve the itching try applying a little Hazeline either pure or diluted with water. If not cured, write again.

FOIE.—Try the Cascara Tabloids and diet-remedies recommended to "Martyr" in the present number. Cascara has a definite liver-action in addition to its other virtues (see notice of the Tabloids in HEALTH, No. 273). It is quite possible your

HE INHERITED THE TENDENCY.



MR. W. L. NOTTON, of 114, King's-cross-road, King's-cross, London, suffered for years from a disordered liver. He tried several medicines at various times, but could get no permanent relief. In a letter to Messrs. H. H. Warner & Co., he says: "I was unfortunate enough to inherit a tendency to liver complaint, which my occupation, being entirely an indoor one, with long hours, naturally served to increase. About every two weeks I was obliged to undergo severe vomiting and purging, accompanied with terrific headaches. I was told that the fault was

entirely due to an inactive liver, and as long as I kept at my business there was no hope for me. I found the attacks increasing instead of diminishing, and finally resolved to try proprietary medicines. I saw a testimonial in one of the newspapers, detailing a similar case to my own, in which a complete recovery had been reached by the use of Warner's SAFE Cure. I had known of this medicine, but had an impression it was only for kidney disease. I procured and commenced taking it, together with Warner's SAFE Pills. The first bottle did not seem to benefit me. I, however, persevered, and at the expiration of two months discontinued it, believing myself thoroughly restored. Since that time I have had no return of my old trouble. My liver, kidneys, and skin are now in good working order, and I consider myself permanently cured. I shall be pleased to answer any inquiries concerning my case."

sedentary habits are against you, but your cycling should counteract these habits. Try a diet such as that indicated, and let us hear from you again.

TELEGRAPH CLERK.—See advice regarding the treatment of catarrh given to "Porthos" in the present number.

PARBLEU.—You have no need to be alarmed; simply live carefully, and, for a time, take the Syrup of the Hypophosphites, as recommended to "Porthos" in the present number. This will act as a tonic and brace up your system.

MORRIS.—What do you mean by "that fearful disease"? Unless you can be more specific and clear in your statement, we shall be unable to aid you.

W. D.—You had far better take the Cascara Tabloids and note the diet-hints named in advice given to "Martyr" in the present number. These hints, together with the use of Dahl's Cakes, advertised in our pages, will cure you. You must give up taking the medicines you are now using. The continued use of such drugs is deleterious.

W. H.—Apply a little Lanoline Cold Cream each night to the part. If this does not suffice of itself to cure you, then use, once or twice daily, a lotion made by adding one part Hazeline to two parts water, or try the Hazeline pure. A change of air to the sea would also be likely to do you good. If not bettered, write again.

WRECKED.—If you had perused the pamphlet you say you have read with any degree of care, you would have seen that your case, so far from being "hopeless," is one of very ordinary kind, and such as only requires strength of mind and ordinary attention to the laws of health in order to restore you completely. Without a stern resolution to live uprightly in the future, no advice can be of any service to you. Simply live plainly, take plenty of out-door exercise, attend conscientiously to your daily work, and take no drugs. Try a cold or tepid sponge bath (without wetting the head) each morning, and you will speedily find your morbid thoughts will cease. We are assuming what your letter implies, that you suffer from no disease and are in good health. There is no reason why, in a year or two, you should not take the step you name—provided always you live a sober, well-conducted life.

AMBULANCE.—Apply hot fermentations, or rub the limbs with warm oil, or with St. Jacobs Oil, as a liniment. If the pains are internal, take twenty drops of Collis Browne's Chlorodyne, in water.

A. B. N.—You should certainly look to the purity of the water you drink. Purchase one of Howie's Filters, advertised in our pages. There is none better. For the rest, try the effect of taking a warm bath occasionally at bedtime, and take twenty grains bromide of potash in a wineglass of water when the pain is troublesome. Wear, also, an Allcock's Porous Plaster across your loins.

C. PEACH.—1. Drink Pitkeathly Water regularly for a time, and avoid alcohol. 2. Bayley's Soap, 17, Cockspur-street, Pall-mall, S.W. 3. No; it is starchy, try Mellin's Food.

PRIMUS.—Give Henderson's Perfect Food Biscuits a trial, and use the Wheatena Biscuits for the children.

COLONIAL.—You need not be alarmed in any way. Read the pamphlet "A Lecture to Young Men," (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and you will find full information therein. Steer clear of quacks, and simply continue to live simply and to take plenty of outdoor exercise.

PORTNOS.—Try Himrod's Asthma Cure, which is used by inhaling the vapour arising from the substance when burned; or smoke Marshall's Cubeb Cigarettes, and bring the smoke down the nostrils. In addition, bear in mind that cases like yours are often only curable by thorough change of air. It is probable that a residence of a month, or even less, at the seaside—say at Eastbourne or Hastings—would effect a cure in your case. Try also the plan of taking a teaspoonful of Syrup of the Hypophosphites, twice daily, in a wineglass of water after your meals.

ARDA.—Apply a little pure vaseline (white) to the eyelid night and morning. For the constipation, try Dahl's Dyspepsia Cakes (advertised in our pages), and let your food contain a large proportion of vegetable matter, including Scott's Midlothian Oat Flour to breakfast and supper. A Cascara Tabloid or two (Messrs. Burroughs, Wellcome & Co.'s) taken at night will also assist your cure.

THE QUEEN'S PRIVATE BAKER
at Buckingham Palace, in recommending Borwick's Baking Powder, writes as follows:—"After giving your Baking Powder a fair trial, I beg to inform you that I find it a most excellent and useful invention."

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MALE ATTENDANTS and NURSES specially for FEVER cases.

Telegraphic Address, "Nursing Institute, London."

TROUBLED.—Try the effect of using an injection of half an ounce of tincture of the perchloride of iron, added to one pint of water. Exercise care over your food (avoid unwashed vegetables) and over the quality of the water you drink.

IGNORAMUS.—Burroughs, Wellcome & Co., Snow-hill Buildings, London, E.C., are the makers. All druggists know Fairchild's Peptonizing Powders.

G. PEARCE.—Wash the parts regularly with Bayley's Spermaceti Soap, and dust thereon afterwards Woolley's Sanitary Rose Powder.

F. F.—Apply to the French Hygienic Society, 56, Conduit-street, Regent-street, London, W., for a safe hair-preparation such as you demand. We do not approve of that you mention.

E. M. A.—Try the Vin Mariani (Roberts & Co., New Bond-street, London, W.) as a suitable tonic. Use as directed on the bottle.

CLERK.—Write to Messrs. Ward & Co., of Eldon-buildings, Bradford, and state what is needed for the case named.

SOLCUS.—It is probable your ailment arises from slight want of tone. Try the effect of taking a teaspoonful of Syrup of the Hypophosphites in a wineglass of water twice daily after your food.

L.—Try the Pyrmont Tablets and ointment for piles prepared by Bayley, 17, Cockspur-street, Pall-Mall, London, S.W.

B. X.—Take a tumbler of hot water between your meals twice or thrice daily. You would be safer to use Grant's Oat Flour in place of oatmeal. The flour is more digestible.

M. G. P.—No drug or remedy alone can ever cure constipation. Try Cascara Cordial in twenty-drop doses taken in water, once or twice daily, between meals; and follow up this remedy, and render its effects permanent, by the use of a diet largely vegetable in its nature—such as Grant's Oat Flour, stewed fruits, prunes and apples, ordinary vegetables, &c. Eat Dahl's Cakes also as part of the treatment.

YORK.—Use Bayley's Tooth Preparations, and specially the mouth wash regularly after meals, and Tooth Powder morning and night. Eat a charcoal biscuit after meals.

RESTING.—Dahl's Cakes (advertised in our pages) should be regularly taken by you as a remedy.

PARENS.—Superfluous hairs can only be satisfactorily removed by electrical means. Read the article on this subject in HEALTH, No. 149. We can send, if desired, on receipt of addressed envelope, address of a specialist who removes hairs in this way.

A. Y.—Try the following liniment:—Camphorated chloral, two and a half parts; pure glycerine, sixteen and a half parts; and oil of sweet almonds, ten parts. These substances are to be well mixed and preserved in a well-stoppered bottle. The method of using the liniment is as follows: A pledget of very soft cotton is soaked in the liniment, and then introduced as far as possible into the affected ear, two applications being made daily. Frictions behind the ear with the same liniment are to be made once a day.

JOHN MARTINE.—Clothe warmly, and take the following:—Chloride of ammonium, two drachms; spirits of chloroform, one drachm; simple syrup, three drachms; water to make up six ounces. A tablespoonful to be taken in water every four hours.

FIVES.—Apply to the face a little pure Lanoline, to which your chemist should add Powdered Calamine (Ver), in the proportion of one drachm to one ounce of Lanoline, thus making a thin paste, easy of application at night.

PARISIAN.—The review of Dr. Ebstein's work on Corpulence appeared in HEALTH, No. 57. Follow out the diet-rules prescribed in the volume named. Send 4d. in stamps to the Publisher of HEALTH for the number in question.

ACTON.—Try a dose of Lamplough's Pyretic Saline on rising in the morning, and follow out the other food-directions already given you. You will get quite well in time. Take a cold sponge bath each morning, and use brisk friction thereafter.

YAK.—If acidity is present try the following:—Subnitrate of bismuth, six grains; carbonate of magnesia, ten grains; powdered gum arabic, twenty grains. Mix to form a powder. Stir in a cup of boiled milk, and, when cool, stir up again before being swallowed. To be taken twice daily after food.

G. ARTHUR.—A vegetable dietary—stewed fruits, apples or oranges, &c., and whole-meal bread, with Scott's Midlothian Oat Flour for supper and breakfast—will suit you. Avoid tea and coffee, and take Cascara Cordial, twenty drops in water, between meals, once or twice daily.

E. F. F.—Sponge with cold water each morning, sleep on a hard mattress, take plenty of open-air exercise, and avoid fluids and suppers late at night.

PONTO.—Try the following for the cure of toothache: Cocaine hydrochlorate, sixteen grains; powdered opium, sixty-four grains; menthol, sixteen grains; althaea, powdered, forty-eight grains; mucilage of acacia, nine grains. Make into one half grain pills and keep in a well-stoppered bottle. For use, one of these is to be inserted in the hollow tooth.

A MOTHER.—Remove the hairs all round the affected parts, in the first place. Wash each morning with "Sanitas" Soap and tepid water. Then paint the patches with sulphurous (not sulphuric) acid. If this treatment fails, apply a lotion consisting of hyposulphite of soda, of strength thirty or forty grains to the ounce of water. Look to the children's general health. Give them a dessertspoonful of Scott's Cod Oil Emulsion (with five drops Fer Bravais added to the oil) thrice daily, after their meals.

GISFUL.—Wash the parts with Bayley's Soap and tepid water regularly, and apply a little Lanoline Cold Cream to the parts at night. Wear gloves continually for some time. If a lotion is needed, try applying to the parts one composed of one part of Hazeline to two parts of water.

Certain HARNESS' Cure.
ELECTROPATHIC BELT
FOR
SLEEPLESSNESS
SLEEPLESSNESS.—The Rt. Hon. LORD BYRON says that—"Harness' Electropathic Belt is invaluable for sleeplessness, I recommend it to all my friends."
Guaranteed to generate a mild continuous current of Electricity, which speedily cures all Disorders of the Nerves, Stomach, Liver and Kidneys. Thousands of Testimonials. Pamphlet & Advice free on application to Mr. C. B. Harness, Consulting Electrician, the Medical Battery Co. Ltd.
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CELLULAR CLOTH & CLOTHING.

THE principle involved in this material for both outer and under clothing is that it is cellular in structure, so that advantage is taken of the non-conducting power of the AIR (one of the best non-conducting substances known) to make it a covering for the body equally fitted for the COLD OF WINTER and the WARMTH OF SUMMER.

Vests, Pants, Pyjamas, Tennis Shirts, &c., made from Cellular Cloth are very HEALTHY, COMFORTABLE, DURABLE, and have the great advantage of being EXCEEDINGLY CHEAP, and of washing WITHOUT SHRINKING.

TOURISTS will find Cellular Clothing INVALUABLE, as it effectually PREVENTS CHILLS and is a POSITIVE SAFEGUARD against the variations of our uncertain climate.

Exhalations from the body pass readily through this clothing, and cleanliness of the surface of the body is much promoted by its use. In this respect it is very superior to FLANNEL, WOOL, MERINO, or any other substances which from closeness of texture retain the cutaneous exhalations.

Opinions of the Press (Extracts).

LANCET, June 16th, 1888.

The idea embodied in this variety of cotton fabric for body clothing is, as the name implies, that of providing ready means of escape for perspiration as vapour, whilst affording facilities for securing next the skin the presence of a good non-conductor of heat in the shape of warm air, and thus avoiding the access of chill. And these objects appear to be well attained by the material submitted to our notice.

MEDICAL PRESS, June 13th, 1888.

The advantages of this form of structure are numerous. Articles so manufactured are light, elastic, and durable, and the air contained in its meshes, of cotton, or cotton and silk, on account of the material being a bad conductor of heat, preserves the body from vicissitudes of temperature. Perspiration passes readily through, and consequently such garments never feel wet, no matter how violent the exertion.

HEALTH, June 22nd, 1888.

The fine meshes of the Cellular Cloth, in the first instance, present us with a material which is eminently porous, and which permits a free circulation of air between the clothing and the skin; air itself being a bad conductor of heat, and therefore in itself an admirable protection, in so far as the conservation of body warmth is concerned. In the second place, the porous nature of the "Cellular

Cloth" permits of the free egress of the skin secretions, which, in place of being locked up in its substance, is allowed to evaporate, while cleanliness of skin is promoted by its use.

BICYCLING NEWS, June 30th, 1888.

The all-wool theorists must have received a severe shock lately upon learning that a company was in existence which not only went in for hygienic principles, but actually dispensed with wool entirely in the formation of their goods. A few weeks ago we informed our readers that we had been trying some new underclothing. This, as may now be imagined, was made of this new Cellular Cloth, so in noticing it here, we are not writing up a thing we know nothing about, nor are we recommending a new thing whose success is in the future doubtful. We have for a month been encased in an undersuit of Cellular Cloth, in place of the useful merino; and when we remind our readers of the almost tropical and by comparison Arctic weather we have experienced during that time, we shall be believed when we say we have been able to test it thoroughly. Cellular Cloth is an excellent material for underwear, we are convinced, and that it does not allow the body to become heated and chilled by the frequent changes in this most fickle of climates, we have proved to our own satisfaction. The Cellular Cloth is woven in such a manner that minute cells appear all through the material on one side, and as this side is placed next the skin, the result is thorough ventilation, preventing perspiration collecting, and an even temperature which is approved of by the highest authorities on the important study of health.

Absolutely Non-Irritating to the Skin.

A LUXURY—CELLULAR SHEETS.

MEDAL of the SANITARY INSTITUTE awarded this Year.

RECOMMENDED BY EMINENT MEDICAL MEN AFTER A THOROUGH PRACTICAL TRIAL.

AGENTS.

R. BRUCE, 27, Oxford-street, W.; A. W. GAMAGE, 127, Holborn, E.C.; J. GROSE, 4, Old Jewry, Cheapside, E.C.; L. JACOBS, 146, Strand, W.C.; A. G. LAWSON & CO., 58, Edgware-road, W.; GEORGE PESCOD, 369, Oxford-street, W.; GEORGE PESCOD, 10, Stockbridge-terrace, Belgravia, S.W. WILLIAM BATE, Southall, Middlesex; FIELD, HAWKINS & CO., Wallingford; F. HAWKINS, Thame; M. A. MOSS, Jersey.

Wholesale only: THE CELLULAR CLOTHING COMPANY, Ltd., 75, Aldermanbury, London, E.C.

CONTINENTAL SPAS.—W. Schacht & Co., Deutsche Apotheke, 26, Finsbury-pavement, E.C., will be glad to give all necessary information about the following Spas:—

CARLSBAD.—The famous Spa for the treatment of the various diseases of the liver, stomach, kidneys, and intestines, diabetes, gout. Extensive walks. Lovely scenery. English Church. New Grand Theatre. Opera. Concerts. Open all the year round.

NEUENAUH, Ahr Valley, near Coblenz. For the effective treatment of abdominal disorders and their consequences—gout, rheumatism. Unrivalled for the cure of diabetes. Every comfort and first-class attendance at the Kur Hotel. Cricket, croquet, and lawn-tennis grounds.

TEPLITZ.—The oldest Spa in Europe. Especially indicated in gout, rheumatism, paralysis, chronic neuralgia, ischias, and in those protracted ailments consequent on musket shots and sword wounds. Mineral, moor, and douche baths. Electricity. Massage. Concerts, theatre. Open all the year round.

TOWLE'S Pennyroyal & Steel Pills FOR FEMALES

Quickly correct all irregularities and relieve the distressing symptoms so prevalent with the sex. Boxes, 1s. 1½d. and 2s. 9d., of all Chemists. Sent anywhere for 15 or 34 stamps, by

**THE LINCOLN & MIDLAND COUNTIES
DRUG CO., LINCOLN.**

BEWARE OF IMITATIONS.

TOOTH-ACHE CURED INSTANTLY BY BUNTER'S NERVINE

Prevents Decay. Saves Extraction. Sleepless Nights Prevented. Neuralgic Head-aches and all Nerve Pains removed by Bunter's Nervine.

All Chemists, 1s. 1½d.

BUNTER'S DENTINE

Is the most Simple & Durable Stopping for Decayed Teeth.

One can easily prepare and place it in the cavity of the Tooth in a soft state, and in a few hours it becomes a perfectly hard and white Enamel, forming as it were a part of the original substance of the Tooth.

All Chemists, 1s. 6d.

Established over Sixty
Years.

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By Appointment to Her
Majesty the Queen, 1852.

J. PULLAR & SONS intimate that in their Works there is every convenience and appliance for Cleaning and Dyeing in the best style the varied and expensive materials in use for Ladies' and Gentlemen's wear, as well as for Household purposes. They direct attention to the superiority of their workmanship, and to the regularity and speed with which articles are returned.

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Goods can be conveniently sent direct through any
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PULLARS' DYE-WORKS, PERTH

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Pommade Trichophile.

A CERTAIN CURE FOR SCURF.

FOR PARTICULARS APPLY TO THE

FRENCH HYGIENIC SOCIETY,
56, CONDUIT-STREET, LONDON, W.

SUMMER TOURS IN SCOTLAND. GLASGOW and the HIGHLANDS.

(Royal Route via Crinan and Caledonian Canals.)



THE ROYAL MAIL STEAMERS, Columba, Iona, Fusilier, Grenadier, Chevalier, Gondolier, Lochawe, Mountaineer, Pioneer, Glengarry, Clydesdale, Linnet, Claymore, Clansman, Cavalier, Staffa, Glencoe, Inverary Castle, Islay, Lochiel, Fingal, Lochness, Ethel, Gladiator, Uda, and Countess.

Sail during the Season for Kyles of Bute, Ardrishaig, Islay, Oban, Fort William, Inverness, Staffa, Iona, Glencoe, Loch Awe, Tobermory, Portree, Gairloch (Loch Maree), Ullapool, Loch Inver, Skornaway, Thurso, &c., affording Tourists an opportunity of visiting the magnificent scenery of Glencoe, the Cuchullin Hills, Loch Coruisk, Loch Maree, and the famed Islands of Staffa and Iona. Official Guide Book, 3d. Illustrated 6d., cloth gilt 1s. Time Bill, with Map and Tourists' Fares, free by post from the Owner, DAVID MACBRAYNE, 119, Hope-street, Glasgow.

WOOLDRIDGE'S TINCTURE

FOR

GOUT, RHEUMATISM AND NEURALGIA.

OF ALL CHEMISTS.

Ladies should notice

That great success of Messrs. Southall's invention of their Sanitary Towels for Ladies—backed up by the powerful recommendation of the whole Medical Press and the important testimony in their favour of professional nurses and obstetric specialists as the greatest boon to womankind produced this century—has caused the Towels to come into almost general use.

Although all rights are secured by Royal Patents, this great success has led to unscrupulous copying, in some cases not only of the advertisements and labels, but the style of the packets, these counterfeit packets are everywhere and disappointing.

Ladies are earnestly requested, in ordering, to specify "Southall's Sanitary Towels."

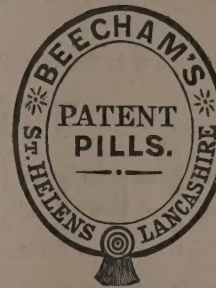
Supplied at 1s. and 2s. per packet of 1 Dozen, being the actual Cost of Washing; by Ladies' Outfitters, Chemists, and Drapers, Everywhere.

Tin Stock Boxes for ladies, 9d., 10d., and 1s. each, to hold Southall's Sanitary Towels, obtainable from Ladies' Underclothing Houses. Post Free from the Manufacturers, at 1s., 1s. 2d., and 1s. 5d.; or with a dozen Towels in each, 2s., 3s. 2d., and 4s. 3d.

Sample Packet of One Dozen Towels

A WONDERFUL MEDICINE.

BEECHAM'S PILLS



ARE universally admitted to be worth a Guinea a Box for Bilious and Nervous Disorders, such as Wind and Pain in the Stomach, Sick Headache, Giddiness, Fullness and Swelling after Meals, Dizziness and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy and Blotches on the Skin, Disturbed Sleep, Frightful Dreams, and all

Nervous and Trembling Sensations, &c. The first dose will give relief in twenty minutes.

Every sufferer is earnestly invited to try one box of these Pills and they will be acknowledged to be

WORTH A GUINEA A BOX.

For females of all ages these Pills are invaluable, as a few doses of them carry off all humours, and bring about all that is required. No female should be without them. There is no medicine to be found equal to Beecham's Pills for removing any obstruction or irregularity of the system. If taken according to the directions given with each box they will soon restore females of all ages to sound and robust health. This has been proved by thousands who have tried them, and found the benefits which are ensured by their use.

For a Weak Stomach, Impaired Digestion, and a Disorders of the Liver, they act like magic, and a few doses will be found to work wonders on the most important organs in the human machine. They strengthen the whole muscular system, restore the long lost complexion, bring back the keen edge of appetite, and arouse into action with the roscud of health the whole physical energy of the human frame. These are FACTS testified continually by members of all classes of society; and one of the best guarantees to the Nervous and Debilitated is BEECHAM'S PILLS have the Largest Sale of an Patent Medicine in the world.

Prepared only and Sold Wholesale and Retail by the proprietor, THOMAS BEECHAM, 8t. Helens, Lancashire, in boxes at 1s. 1½d. and 2s. 9d. each.

Sold by all Druggists and Patent Medicine Dealers everywhere.

N.B.—Full directions are given with each box.

ONE BOX OF CLARKE'S B4I PILLS

IS WARRANTED TO CURE

All ailments of the Urinary Organs (acquired or constitutional), Gravel, and Pains in the Back.

GUARANTEED FREE FROM MERCURY.

Sold in Boxes, 4s. 6d. each, by all Chemists and Patent Medicine Vendors throughout the World; or

"If permitted to speak but once for themselves, they will not fail to win friends and admirers."

The above is the verdict of the Editor of one of the most influential organs of public opinion on

THE "EDINBURGH" COFFEE BEVERAGES, &c.

TO MEDICAL MEN!

PLEASE note that SYMINGTON'S "Edinburgh" ESSENCE OF DANDELION COFFEE is made from English grown Taraxacum and finest Coffee only, roasted, ground, and conserved by their own patent process. It is highly spoken of by the Medical press and hundreds of the Profession as a most useful beverage for the Bilious and Dyspeptic. Trade mark, "The Pyramid."

Makers also of Pure Coffee Essence, Coffee and Milk, &c., &c. To be had of all Chemists and Grocers.

DO YOU KNOW?

THAT SYMINGTON'S "Edinburgh" COFFEE ESSENCES surpass all others for cheapness, purity, and strength of flavour? Being distilled by a patent process, they retain the delicate aroma of the finest Coffee, from which they are prepared. They are now used in thousands of Households, Hotels, and Restaurants in Great Britain and the Colonies, and are praised by all.

To be had of all Chemists and Grocers. Beware of imitations of bottles and labels.

CAFÉ AU LAIT

In an instant, by using SYMINGTON'S "Edinburgh" COFFEE AND MILK, a combination of the finest coffee extract, best condensed milk, and loaf sugar, in a portable form. Colonel R. writes:—"Since first trying your Coffee and Milk six years ago, I have always used it, and recommended it to my friends."

Thos. Symington & Co. are also makers of Chocolate and Milk, and Cocoa and Milk, and of the celebrated "Edinburgh" Coffee Essences.

MY WIFE SAYS:

"I REGRET I did not know of SYMINGTON'S 'Edinburgh' COFFEE ESSENCES before, they are so economical and handy. I can now make you a cup of delicious coffee in an instant." Used everywhere, and praised by all who use them. Try Symington's Coffee and Milk, Chocolate and Milk, and Cocoa and Milk, and you will always use them. To be had of all Chemists and Grocers. The 1s. size bottle makes 40 cups.

TO LADIES AND BACHELORS!

ARE you aware that SYMINGTON'S "Edinburgh" COFFEE ESSENCES are pure and palatable, and cheaper to use than the best dry coffee? Try one bottle, and you will find it saves you trouble, time, and money; also that it clears the brain, braces the nerves, and invigorates the system. Beware of imitations of the labels and bottles. Ours are sold by most Grocers.

FOR PIC-NICS OR JOURNEYS,

SYMINGTON'S "Edinburgh" COFFEE ESSENCES, and their COFFEE & MILK, CHOCOLATE AND MILK, and COCOA AND MILK will be found very handy. To be had of all Chemists and Grocers. Trade mark for bottled goods, "The Pyramid"; trade mark for tinned goods, "Edinburgh Castle." Beware of cheap imitations, and buy only "Symington's Edinburgh."

PURE, CHEAP, HANDY, AND ECONOMICAL IN USE.

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